DOCUMENT RESUME

ED 181 794 HE 012 182

AUTHOR Dumont, Richard G.
TITLE Final Report for the THEC Performance Funding Project at Tennessee Technological University.
INSTITUTION Tennessee Technolcgical Univ., Cookeville.
SPONS AGENCY Tennessee Higher Education Commission, Nashville.
PUB DATE Jul 78
NOTE 119p.; Best copy available
AVAILABLE FROM THEC Performance Funding Project, P.O. Box 5166, Tennessee Technological University, Cookeville, TN

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS *Academic Ability; Alumni; Basic Skills; College Students; Economics; Educational Economics; *Educational Quality; Evaluation Methods; Financial Support; Higher Education; Mathematics; Objectives; *Performance Criteria; Program Descriptions; Questionnaires; Sciences; *State Aid; *State Boards of Education; *State Standards; Surveys; Writing Skills
IDENTIFIERS *Tennessee Technological University

ABSTRACT

The activities and accomplishments of the second year of the Tennessee Higher Education Commission's Performance Funding Project at Tennessee Technological University are reported. The purpose of the Project was to explore the feasibility of allocating some portion of state funds to colleges and universities based on a performance criterion with performance centered on the instructional mission. The report is organized into four sections: Descriptions of Project Activities, Evaluation and Recommendation, Abstract of Goals and Indicators, and the Appendix. Institutional goals and performance indicators were chosen and alumni and students were surveyed to assess the appropriateness of the goals. Writing skills, speaking skills, mathematical abilities, critical thinking and problem-solving abilities, and reading ability were assessed for Tennessee Technological University students as well as their understanding of history, social sciences, economics, behavioral sciences, and science and technology. Survey results for each category are presented and the survey instrument is included. (SF)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED181794

FINAL REPORT FOR THE THEC PERFORMANCE FUNDING PROJECT

AT TENNESSEE TECHNOLOGICAL UNIVERSITY

BEST COPY AVAILABLE

JULY, 1978

THEC PERFORMANCE FUNDING PROJECT
P.O. BOX 5166
TENNESSEE TECHNOLOGICAL UNIVERSITY
COOKEVILLE, TENNESSEE

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Richard Dumont

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

HE 012 182

FINAL REPORT FOR THE THEC PERFORMANCE FUNDING PROJECT

AT TENNESSEE TECHNOLOGICAL UNIVERSITY

Prepared by:

Richard G. Dumont, Ph.D.
Project Director

With the
Advice and Assistance
of the Faculty Associates:

Dr. S.K. Ballal
Professor
Department of Biology

Dr. LeBron Bell
Associate Professor
Department of Health and
Physical Education

Dr. B.F. Jones
Professor
Department of History

Dr. Homer Kemp
Associate Professor
Department of English

Dr. S.B. Khleif
Associate Professor
Department of Mathematics
and Computer Science

Ms. Lorraine Peters
Assistant Professor
School of Home Economics

Dr. Carl J. Seiter
Assistant Professor
Department of Secondary
Education and Foundations

Ms. Gretta Stanger
Assistant Professor
Department of Sociology
and Philosophy

Dr. Robert T. Swindell
Professor
Department of Chemistry

Dr. Bruce Throckmorton
Professor
Department of Economics
and Finance

Dr. Richard Troelstrup
Associate Professor
Department of Educational
Psychology and Counselor Education

Dr. Marie B. Ventrice
Assistant Professor
Department of Mechanical Engineering

TENNESSEE TECHNOLOGICAL UNIVERSITY
COOKEVILLE, TENNESSEE

JULY, 1978

This is a report on the activities and accomplishments of the second year of the THEC Performance Funding Project at Tennessee Technological University. It has been prepared in keeping with the contractual agreement between the Tennessee Higher Education Commission and Tennessee Technological University, a contract which was in effect throughout the period October 1, 1977 to June 30, 1978. The report is organized into four sections: DESCRIPTION OF PROJECT ACTIVITIES; EVALUATION AND RECOMMENDATIONS; ABSTRACT OF GOALS AND INDICATORS; and the APPENDIX.

DESCRIPTION OF PROJECT ACTIVITIES

The institution-wide instructional goals and associated performance indicators for the Project are stated explicitly and described in detail in the October, 1977 End-of-Year Report, which is on file with the Commission and which is available from Tennessee Technological University upon request to the Project Director. That report describes a systematic and thorough goal-identification process involving representative faculty participation and maximum feasible faculty involvement through the work of an advisory group of twelve Faculty Associates, representing the University's five colleges and twelve separate departments; and through a major survey of all University Faculty, which yielded a response rate approximating 90%.

The emphasis upon campus and community awareness and involvement in the Project was continued and expanded in the second project year, as the following chronological outline of activities and events reveals:

October - December: Planning for the Data-Gathering Effort

The second project year began with the development of plans for the data-gathering effort by the Faculty Associates and the Project Director.

A decision was made to gather data on but 14 of the 31 goals developed in the first project year. Reluctantly, it was determined that available time and resources would simply not allow for an adequate and satisfying data-gathering effort regarding the indicators for all 31 of the goals identified as important by the University faculty. Assessment was therefore focused upon "essential skills" (writing, reading, speaking, mathematical), "basic understandings" (history, social sciences, science and technology, literature), "special attributes" (critical thinking and acquaintance with major methods of inquiry), and "preparation" for further study and for employment.

As described in the October, 1977 End-of-Year Report, three classes or categories of indicators were identified for each instructional goal: (a) "More or less 'objective,' readily available, and 'hard' preexisting data on institutional activity, which may be justified in terms of its contribution to goal attainment;" (b) "One or more extra-institutional standardized tests intended as partial measures of goal attainment;" and (c) "Student and alumni reported satisfaction with personal goal attainment as determined by sample surveys." An important aspect of the planning phase involved securing the services of "Faculty Experts" to assist the Director in the coordination and execution of the data-gathering tasks. Specifically, a demographer agreed to perform the task of gathering and analyzing the "preexisting data on institutional activity;" a psychologist assumed responsibility for the administration and analysis of results of "extra-institutional standardized tests;" and a department chairman from the College of Education assisted the Project Director with the "student and alumni reported satisfaction" surveys. Faculty were also identified and provided with orientation to serve as raters for the ACT COMP (College Outcome Measures Project). These faculty represented the departments of English (for the COMP domain of Communicating), Civil Engineering (for Using Science and Technology), History (for Functioning Within Social Institutions), and Business Administration (for Solving Problems).

January: Increasing Faculty and Student Awareness of Project Activities

Although the objectives and activities of the project were quite well-publicized from the outset, through the media of community and university newspapers and local radio and television and through the dissemination of numerous written materials and progress reports to the faculty by the Project Director and Faculty Associates, a concerted effort was made during the month of January to heighten student awareness and to allow open forums for the discussion of issues. Of these activities, perhaps the most significant were two open meetings held to which all interested faculty and student leaders were invited. At the first of these, Dr. E. Grady Bogue, Project Director from the THEC, spoke and responded to pointed and difficult questions from administrators and faculty. A second open meeting consisted of a formal presentation and discussion about the ACT COMP, directed by Dr. Leslie C. Duly, COMP Coordinator at the University of Nebraska at Lincoln, one of COMP's pilot institutions. At both of these meetings, controversial and difficult questions centering primarily on issues of focal concern to faculty (e.g., academic freedom and institutional autonomy) were discussed openly and candidly.

February: Preparations for Major Data-Gathering Efforts

During the month of February, preparations were made to gather performance data regarding the three major classes of indicators identified previously:

Preexisting data on institutional activity - Liaison was established and contacts made with the Office of Admissions and Records, the Computer Center, the Division of Student Services, the several Colleges, and selected academic departments for their assistance in providing and/or securing data.

Extra-Institutional Standardized Tests - Liaison was established with appropriate professional staff at the headquarters of The American College Testing Program in Iowa City in preparation for the administration of the

ACT Battery and the ACT COMP. Simultaneously, a stratified random sample of seniors was selected and invited to participate in the assessment. Stratification was based upon College, sex, and QPA of student. On the assumption that oversampling would be required to assure the desired sample size of 100, 143 seniors were invited to take the tests.

The invitation to participate assumed the form of a letter from the President of the University. Incentives for participation consisted of the promise of providing assistance to the University's efforts in the area of instructional improvement, gains in self-knowledge, intrinsic enjoyment of the assessment activity, a special certificate of appreciation, and a monetary reward for performance.

Student and alumni reported satisfaction - Questionnaires for both the student and alumni surveys were developed, using materials available through the National Center for Higher Education Management Systems (NCHEMS) as primary models. These instruments appear in the APPENDIX of this report.

March - April: Gathering Data on Performance Indicators

The principal data-gathering efforts of the Project occurred during the months of March and April:

Extra-Institutional Standardized Tests - On March 28, 1978, the ACT Battery and the ACT COMP were administered to the stratified random sample of seniors. A total of 112 seniors participated in the assessment, which was conducted by the University Counseling Center's professional staff. With the exception of significant student complaints about poor audio reproduction (some of the COMP test stimuli are on tape) and about having to appear at a subsequent date for a ten-minute taping session (some of the COMP test answers require a verbal response), the assessment experience appears to have been successfully executed.

Student and alumni reported satisfaction - Survey questionnaires, accompanied by an appropriate cover letter from the President of the University, were sent to enrolled seniors and to recent alumni (Class of 1977) late in April, utilizing the Campus Mail system for the former and the U.S. Postal Service for the latter. The initial mailing plus one follow-up yielded a 75% return (N=751) on the student survey; two follow-ups resulted in a 64% return (N=529) on the part of alumni. Selected cross-tabulations using "week-of-return" as an independent variable with "key" dependent variables revealed no evidence of any significant non-response bias.

Preexisting data on institutional activity - With the cooperation of the college deans, the Division of Student Affairs, the Office of Admissions and Records, and several appropriate administrators and faculty, the very tedious task of locating, accumulating and compiling relevant activity data occurred primarily during this period.

May - June: Final Analysis of all Project Data

The ACT COMP - The four faculty raters spent the months of May and June evaluating the performance of the sample of 112 seniors on the ACT COMP. Scores were subsequently computed for the four COMP sub-domains of Communicating about Social Institutions, Communicating about Science and Technology, Solving Social Problems, and Solving Scientific and Technological Problems. Statistics summarizing the results of this analysis appear in the ABSTRACT OF GOALS AND INDICATORS section of this report, organized and presented under appropriate goal and goal area headings. The data show that Tennessee Technological University seniors compare favorably with those seniors constituting the ACT COMP normative group, particularly in the two sub-domains of Using Science and Technology. Of course, the COMP is still in its experimental-developmental phase, with a correspondingly small though diverse normative group. Nonetheless, the performance of the sample of this

University's seniors is quite satisfying, since available evidence suggests that faculty raters applied rigorous standards in their evaluations.

The ACT Battery - Responsibility for the scoring of the ACT Battery was assumed by the Project Director with the help of a student assistant. Average performances for the sample of seniors on the four sub-tests and on the Composite are reported under appropriate goal and goal area headings in the ABSTRACT OF GOALS AND INDICATORS. As noted in the descriptive passages accompanying the bar graphs, all raw score-to-standard score conversions were accomplished utilizing grade twelve conversion tables. This procedure was followed so as to allow for the strictest possible standardization among relevant comparison groups. Of course, without an appropriate experimental design utilizing one or more control samples, it is impossible to isolate or "untangle" institutional or instructional effects on gains in seniors scores from the effects of other possible "confounding" factors, such as those of maturation, pretesting, or other environmental effects. In this regard, it has been suggested by some that the use of grade thirteen conversion tables provides a "control for maturation," and that such conversions are desirable for the kinds of data reported in this study. The Project Director takes serious issue with this contention, maintaining that only a properly executed experimental design with control groups (quite outside the scope and beyond the resources of this project) would allow the determination of any maturation effects. In fact, there is very good reason to believe that the use of grade thirteen conversion tables functions to introduce several indeterminate and potentially confounding variables, quite apart from any maturation component. Specifically, those students taking the ACT tests in their first year of college or later ("grade thirteen") may differ from those who take the tests as high school seniors (the majority of students who take the ACT Battery; for example, as many as 85% to 90% of this University's students who have taken the Battery) in several ways other than age. In particular, many may be young, middle-aged, or older adults continuing their formal education after a few or several years of experience in the adult world. Their "grade thirteen" scores, therefore, may be reflecting experiences in the world of

work, in the military, and in many other adult roles, which are not considered as "maturation" in its customary social-scientific usage, and which might be even more likely to have an effect on ACT grade thirteen conversion tables than "age" per se. Other possible biasing factors of "selection" may be operating to make the post-high school group significantly different from those students who take the tests as secondary school juniors and seniors.

The implications of the above discussion regarding the ACT gain scores reported in this project should be clear: We contend that they very likely represent real gains in the areas tested (all differences are statistically significant beyond the .0001 level, and they reflect very substantial percentile shifts), but we simultaneously readily admit to being unable to specify the reasons for those gains. In any event, it is satisfying to be able to report that significant gains do occur.

The Surveys - All data preparation, processing and interpretation concerning the surveys of seniors and alumni was performed during the months of May and June. Both seniors and alumni were queried as to self-estimated progress relative to and perceived importance of the several goals which are the subject of this report. Both types of questions on both samples reveal generally positive results, particularly with regard to the development of problem solving abilities and preparation for further study and for employment. Survey results are summarized in the various percentage distribution tables of the ABSTRACT OF GOALS AND INDICATORS.

Final compilation and organization of institutional activity data was accomplished in this period, with the effort extending into July.

We conclude this section with a brief discussion of one of the more important "side benefits" arising from our data-gathering efforts, that is, the opportunities provided for institutional and educational research.

Opportunities Provided for Research as a Result of Project Activities

At the Eighteenth Annual Forum of the Association for Institutional Research, held in Houston in May, the Project Director presented a paper, "Report on a Pilot Project in Performance Funding." The presentation was very well received, with requests for copies of the paper coming from over fifty colleges and universities from throughout the United States and Canada. The presentation also prompted an invitation to the Project Director to provide advice to and possible future consultation services for the "Kentucky Outcomes Project," which is being sponsored by the Kentucky Council on Higher Education.

The assessments involving the ACT Battery and the ACT COMP, together with the student survey, have created a very "rich" data base. Specifically, 93 of the 112 seniors participating in the testing exercise also completed the survey questionnaire. Confidential identification numbers allow the merging of these data files with one another and also with existing student records. Some of the more obvious and important kinds of researchable questions which this data base allows are: What are the kinds of relationships which exist between gain values on the ACT Battery and scores on the several related COMP sub-domains? How does information provided by the "objective" measures of achievement (ACT Battery and ACT COMP) compare with that from the "subjective" responses to questionnaire items (self-reports of progress)? What are the kinds of relationships which exist between project-generated data on the one hand and student QPA's, grades in particular courses, "demographic variables," and other data available in existing student records on the other hand? These represent but a few of the many important research questions which our data allow to be formulated.

During the coming year, the Project Director intends to encourage faculty colleagues at this institution and perhaps at others to articulate and to pursue empirical inquiries in collaborative efforts. One Faculty Associate has already prepared and submitted for publication a paper deriving from an analysis of data resulting from the faculty goals survey of the first project year.

EVALUATION AND RECOMMENDATIONS

With the second year of the pilot effort at Tennessee Technological University at an end, it is possible to say that the principal project objectives have been realized. Specifically, in the interest of improving upon the current appropriations-allocations process by introducing a complementary performance-effectiveness feature: (1) Institution-wide instructional goals have been developed; (2) Performance indicators have been identified for each of the instructional goals; (3) Data have been gathered relevant to the several performance indicators; and (4) Complementary performance-effectiveness alternatives to the current enrollment-driven formula have been considered and discussed.

Regardless of the ultimate outcome of the statewide Performance Funding Project effort, accomplishment of pilot project objectives at the institutional level may be taken as evidence of a receptivity to the general notion of performance funding. That receptivity may be due in large part to the promise performance funding holds for compensating at least partially for the faults generally attributed to enrollment-based formulae, with their emphases upon quantity rather than quality of instruction.

Although experience with the pilot effort at Tennessee Technological University suggests a generally positive and receptive climate, we do not wish either to understate or to minimize the importance of several serious questions and knotty problems which remain. For example, throughout the course of the entire project, doubts and reservations have been expressed by several administrators and faculty members. Some of the most-often-repeated include concerns regarding: (a) the potential for increasing external control and internal "meddling" by the THEC and the State Board of Regents; (b) the likelihood of the development of pressures for the indicators, which are the "means" of evaluation, to become "ends" in themselves, thereby displacing the corresponding instructional goals; (c) the "uninformed" interpretation and use of performance data, i.e., that which might occur without proper understanding or appreciation of matters regarding reliability, validity and comparability; and (d) the "illegitimate" and

"misleading" comparisons of performance on similar or common indicators for institutions with differential resources, missions and clientele. Among both administrators and faculty, therefore, there continues to exist significant uneasiness and skepticism regarding the fundamental issue of whether performance funding can be made compatible with the preservation of academic freedom and institutional autonomy, which have been and which must continue to be the sine qua non of the higher education enterprise in a free society.

In light of the above considerations, any alterations to the current appropriations-allocations process which might be acceptable to the majority of professionals working within this institution would have to satisfy the kinds of concerns cited herein. Although several funding alternatives have been considered and discussed by the Faculty Associates, including those articulated at recent Project Directors' meetings and those appearing in the THEC publication, Case Studies in Performance Funding, a novel and consensus-based proposal has not emerged from our deliberations as of this time. It is the opinion of the Project Director, however, that a recent proposal appearing in a January 26, 1978 working paper entitled "A Proposal for Performance Funding in Tennessee Higher Education" would be likely to be generally well-received at this institution. That proposal, which was drafted to stimulate thinking and discussion by members of the THEC staff, would introduce an "Instructional Improvement" schedule into the current formula. Ostensibly, that performance funding modification of the formula would incorporate the following essential features:

(1) Stimulating instructional improvement projects that would advance appropriate statewide goals, while simultaneously encouraging institutional diversity (autonomy) in the pursuit of those goals;
(2) Allocating funds both as a stimulus (before) and as a reward (after) for performance demonstration;
(3) Incorporating a review process utilizing a "blue ribbon" panel of lay and professional members to judge both the merits of proposals and satisfactory execution of planned project activities; and

(4) Allocating funds to institutions on the basis of their willingness to provide "public" evidence of the results of their instructional improvement efforts, and not on the basis of actual outcomes or indicator values per se.

As we await with great interest the final outcome of the state-wide Performance Funding Project, we are hopeful that our efforts might contribute to the better realization of the two highly-valued goals of instructional excellence and rational resource allocation for Tennessee Higher Education.

ABSTRACT OF GOALS AND INDICATORS

PERFORMANCE FUNDING REPORT

FOR

TENNESSEE TECHNOLOGICAL UNIVERSITY

A SUMMARY ANALYSIS

DR. RICHARD G. DUMONT

JULY, 1978

THEC

PERFORMANCE FUNDING PROJECT

In the fall of 1974, the Tennessee Higher Education Commission set in motion a evelopmental effort entitled the The Performance Funding Project. The purpose of that effort as to explore the feasibility of allocating some portion of state funds to colleges and niversities on a performance criterion, with performance centered on the instructional ission.

Over the next two years, the Commission sought and attracted $555,000 in external upport from several funding sources -- Kellogg Foundation, Ford Foundation, Fund for the mprovement of Postsecondary Education (an HEW Agency), and one foundation desiring to remain nonymous. These funds were used to underwrite Commission coordination of the project and to upport twelve campus-bases pilot projects reaching over the years 1976-1978.

Each of these twelve projects was funded through a performance contract with the nstitution and its respective governing board to. . .

(1) Identify goals reflective of institutional mission

(2) Identify performance indicators that would provide public evidence of goal achievement

(3) Acquire data on selected performance indicators

(4) Supply data on the results.

his institutional report is designed as a streamlined communication of results. More complete escription of this effort involving the Commission, the two governing boards, and 12 of their ampuses can be found in reports on file with the Commission.

THE PERFORMANCE FUNDING PROJECT

AT

TENNESSEE TECHNOLOGICAL UNIVERSITY

PRESIDENT OF THE UNIVERSITY: Dr. Arliss L. Roaden

DIRECTOR OF THE PROJECT: Dr. Richard G. Dumont

DESCRIPTION OF THE UNIVERSITY:

Tennessee Technological University is a state-supported institution of approximately 7,500 headcount students, founded in 1915 and located in Cookeville, a city of 20,000, which is in one of the most rapidly growing areas of the Southeast.

The University is primarily a resident institution, with about 60% of its students living in dormitories or other university housing. The majority of its students work while attending school. Of the 7,500 students, 800 are enrolled in graduate programs. While the majority of students are from the Upper-Cumberland region and 90% are drawn from 93 of the state's 95 counties, some 40 states and 36 foreign countries are represented, contributing to a rich diversity in the student body.

Programs of the University include offerings in five colleges -- Agriculture and Home Economics, Arts and Sciences, Business Administration, Education, and Engineering. Masters programs are available in several of the departments comprising the five colleges; and a single inter-disciplinary doctoral degree in Engineering is offered.

Work on this project has been guided by the Project Director, Dr. Richard G. Dumont, who has been with the project over the two year period. He was assisted and advised by a group of twelve Faculty Associates, selected deliberately so as to be as representative as possible of the diversity represented the University's several departments and programs. Selection of the institutional goals and performance indicators was a primary responsibility of the Faculty Associates, with affirmation of the goals identified coming from a survey of the entire faculty, which yielded a response rate approximating 90%. Because of time and fiscal constraints, the original list of 31 goals was narrowed to those reported here. Additionally, in the interest of a more parsimonious summary analysis, those specific goals having similar or common indicators have been organized into "Goal Areas."

The appropriateness of the goals which are the subject of this report has received additional affirmation recently by virtue of the results of major Senior and Alumni surveys, which were conducted in recent months.

GOAL AREA - To ensure that students develop essential communication skills.

SPECIFIC GOALS - Effective Writing Abilities
Effective Reading Abilities
Effective Speaking Abilities
Effective Mathematical Abilities

INDICATORS - Extra-Institutional Standardized Tests:

ACT scores of a sample of seniors as compared with those at entry.

Performance of a sample of seniors on ACT's COMP (College Outcome Measures Project).

Student and Alumni Surveys:

Student and alumni reported satisfaction with the development of essential communication skills as determined by surveys.

Selected Data on Institutional Activity:

Student enrollments and performances in University-wide required English courses.

Student performances on the University's English Qualifying Exam (EQE).

Student utilization of the English Laboratory for remedial work.

Student enrollments, performances and evaluations of Honors Courses.

Student participation in writing enrichment activities and programs (e.g., student publications, scholarly and professional papers, and the like).

Participation and performances of foreign students in ESL (English as a Second Language) courses, and in the ELI (English Language Institute).

Student enrollments, completions and performances (as measured by the Nelson-Denny Reading Test) in the College Reading Improvement Program.

Library utilization statistics.

Student responses to selected questions on ETS's CSQ (Educational Testing Service's College Student Questionnaire).

Student participation in Debate and Theatre programs.

Student participation in organizational roles where formal speaking and discussi
are required.

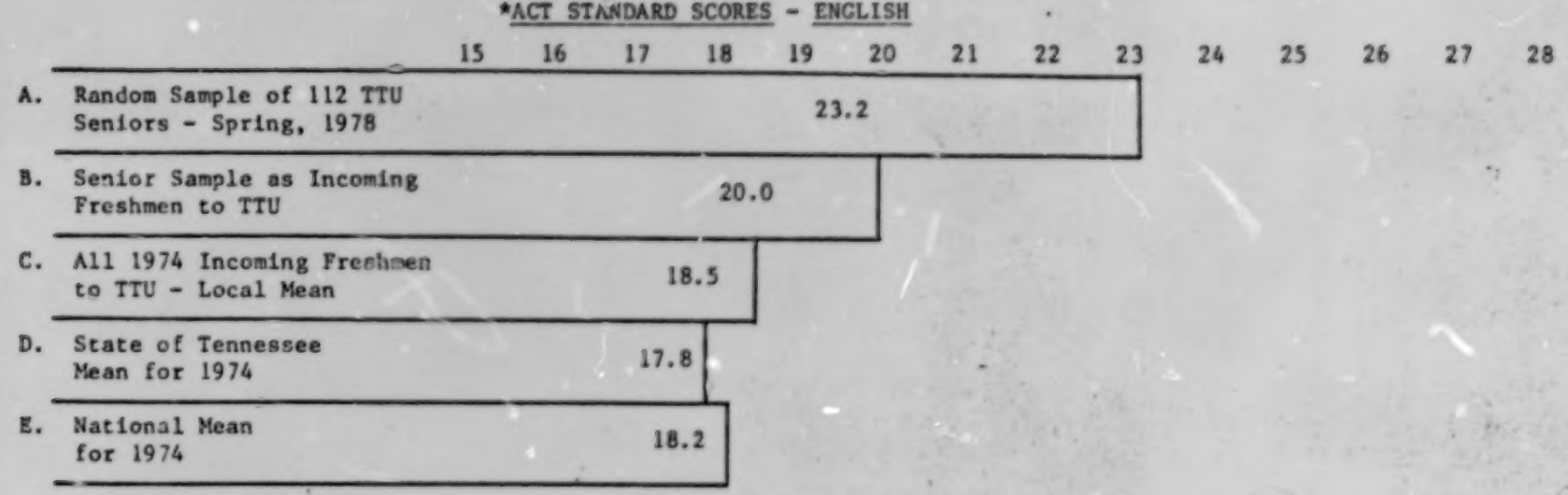
Student enrollments and performances in widely-required basic mathematics course

ASSESSMENT - Extra-Institutional Standardized Tests were administered to a stratified ran.om sample of 112 seniors on March 28, 1978.

Student and Alumni Surveys were conducted during the Spring Quarter, 1978. A to of 751 enrolled seniors responded, representing a 75% response rate. A total of recent alumni (class of 1977) responded, representing a 64% response rate.

Selected Data on Institutional Activity were complied for the following recent Quarters: Spring, 1977; Fall, 1977; and Winter, 1978.

RESULTS - ACT English Usage Test to Assess the Development of Effective Writing Abilities.


*ACT STANDARD SCORES - ENGLISH
15 16 17 18 19 20 21 22 23 24 25 26 27 28
A. Random Sample of 112 TTU Seniors - Spring, 1978
23.2
B. Senior Sample as Incoming Freshmen to TTU
20.0
C. All 1974 Incoming Freshmen to TTU - Local Mean
18.5
D. State of Tennessee Mean for 1974
17.8
E. National Mean for 1974
18.2

*In the interest of strictest possible comparability, all raw score-to-standard score conversions are based on grade twelve conversion tables.

A - B: Shows gain in performance on ACT by sample of seniors since entering TTU. In the absence of a control sample, however, it is not possible to specify what proportion of the gain is due to instructional effects as opposed to such factors as maturation, pretesting, or other environmental effects.

B - C: Shows that TTU seniors have higher average ACT scores than freshmen of four years earlier, suggesting that the more able students get to be TTU seniors, while those with less ability are less likely to reach the senior year.

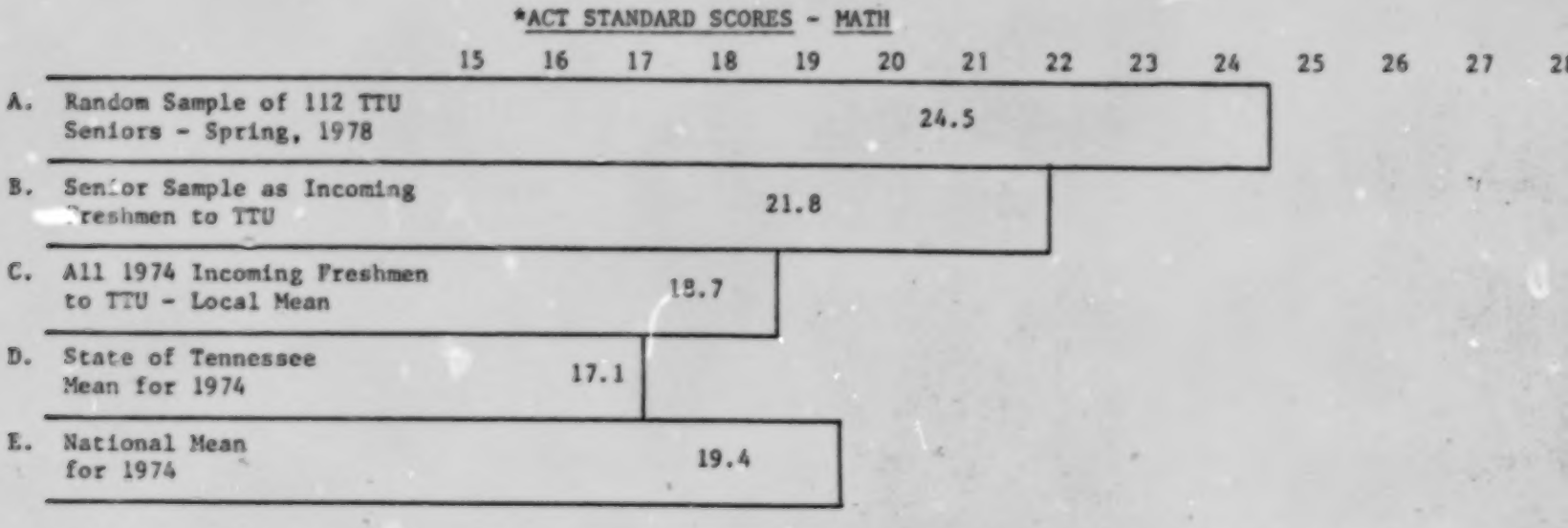
C - D: Shows that freshmen entering TTU have higher average ACT scores than other entering freshmen in Tennessee.

C - E: Shows that freshmen entering TTU have ACT scores which are approximately equal to the national average.

ANALYSIS - The American College Testing Program describes this test as one "...that measures the student's understanding of the conventions of standard written English and use of basic elements of expository writing: punctuation, grammar, sentence structure, diction, style, logic, and organization."

Tennessee Tech students compare favorably with national averages; the data are also suggestive of gains in the development of effective writing abilities while at TTU.

RESULTS - ACT Mathematics Usage Test to Assess the Development of Effective Mathematical Abilities.



*In the interest of strictest possible comparability, all raw score-to-standard score conversions are based on grade twelve conversion tables.

A - B: Shows gain in performance on ACT by sample of seniors since entering TTU. In the absence of a control sample, however, it is not possible to specify what proportion of the gain is due to instructional effects as opposed to such factors as maturation, pretesting, or other enviornmental effects.

B - C: Shows that TTU seniors have higher average ACT scores than freshmen of four years earlier, suggesting that the more able students get to be TTU seniors, while those with less ability are less likely to reach the senior year.

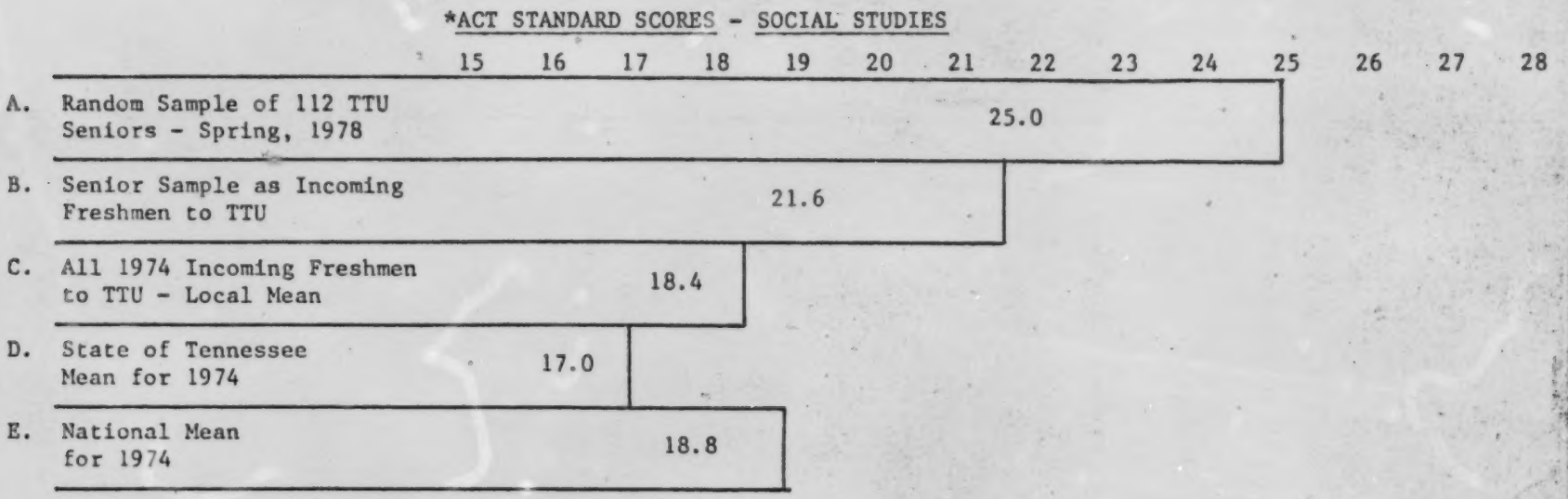
C - D: Shows that freshmen entering TTU have higher average ACT scores than other entering freshmen in Tennessee

C - E: Shows that freshmen entering TTU have ACT scores which are slightly lower than the national average.

ANALYSIS - The American College Testing Program describes this test as one "...that measures the student's mathematical reasoning ability. It emphasizes the solution of practical quantitative problems which are encountered in many postsecondary curricula and includes a sampling of mathematical techniques covered in high school courses." Test content includes "Arithmetic and Algebraic Operations;" "Arithmetic and Algebraic Reasoning;" "Geometry;" "Intermediate Algebra;" "Number and Numeration Concepts;" and "Advanced Topics."

Tennessee Tech students compare favorably with national averages; the data are also suggestive of gains in the development of effective mathematical abilities while at TTU.

RESULTS - ACT Social Studies Reading Test to Assess the Development of Effective Reading Abilities.


*ACT STANDARD SCORES - SOCIAL STUDIES
15 16 17 18 19 20 21 22 23 24 25 26 27 28
A. Random Sample of 112 TTU Seniors - Spring, 1978
25.0
B. Senior Sample as Incoming Freshmen to TTU
21.6
C. All 1974 Incoming Freshmen to TTU - Local Mean
18.4
D. State of Tennessee Mean for 1974
17.0
E. National Mean for 1974
18.8

*In the interest of strictest possible comparability, all raw score-to-standard score conversions are based on grade twelve conversion tables.

A - B: Shows gain in performance on ACT by sample of seniors since entering TTU. In the absence of a control sample, however, it is not possible to specify what proportion of the gain is due to instructional effects as opposed to such factors as maturation, pretesting, or other environmental effects.

B - C: Shows that TTU seniors have higher average ACT scores than freshmen of four years earlier, suggesting that the more able students get to be TTU seniors, while those with less ability are less likely to reach the senior year.

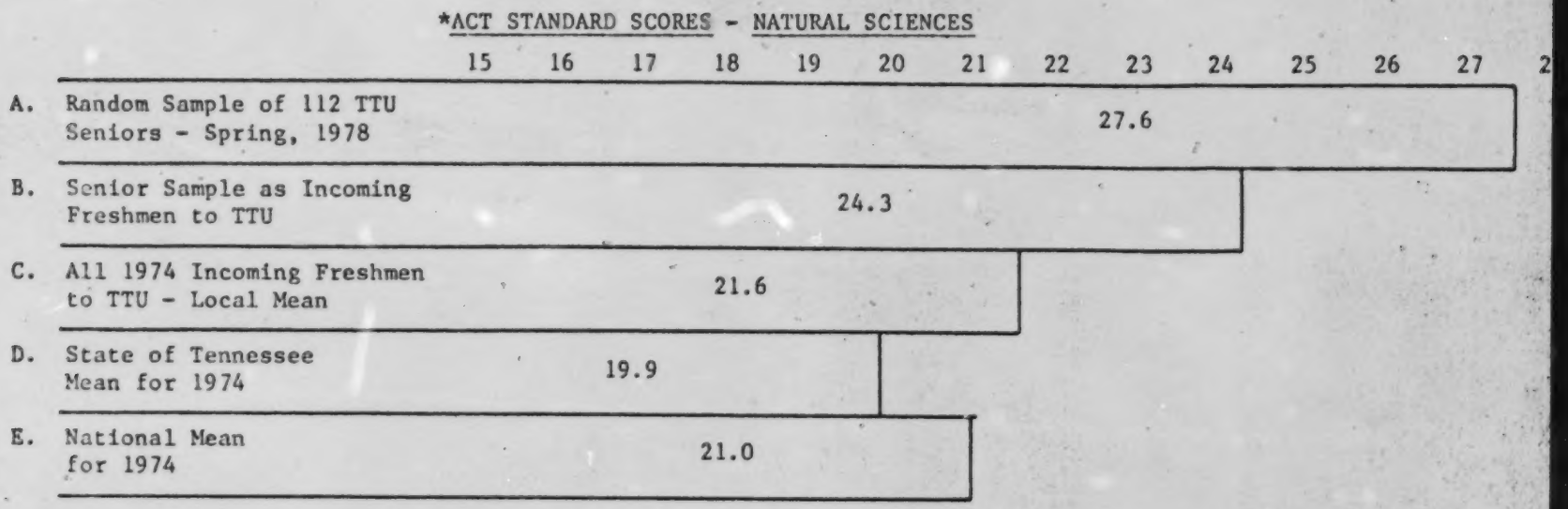
C - D: Shows that freshmen entering TTU have higher average ACT scores than other entering freshmen in Tennessee.

C - E: Shows that freshmen entering TTU have ACT scores which are approximately equal to the national average.

ANALYSIS - Although The American College Testing Program describes this test as one "...that measures comprehension, analytical and evaluative reasoning, and problem-solving skills required in the social studies," a full 70% of the items are based on reading passages and they "...require not only reading comprehension skills, but the ability to draw inferences and conclusions, to examine the interrelationships and import of ideas in the passage, to extend the thoughts of the passage to new situations, to make deductions from experimental or graphic data, and to recognize a writer's bias, style, and mode of reasoning."

Tennessee Tech students compare favorably with national averages; the data are also suggestive of gains in the development of effective reading abilities while at TTU.

RESULTS - ACT Natural Sciences Reading Test to Assess the Development of Effective Reading Abilities.


*ACT STANDARD SCORES - NATURAL SCIENCES
15 16 17 18 19 20 21 22 23 24 25 26 27
A. Random Sample of 112 TTU Seniors - Spring, 1978
27.6
B. Senior Sample as Incoming Freshmen to TTU
24.3
C. All 1974 Incoming Freshmen to TTU - Local Mean
21.6
D. State of Tennessee Mean for 1974
19.9
E. National Mean for 1974
21.0

*In the interest of strictest possible comparability, all raw score-to-standard score conversions are based on grade twelve conversion tables.

A - B: Shows gain in performance on ACT by sample of seniors since entering TTU. In the absence of a control sample, however, it is not possible to specify what proportion of the gain is due to instructional effects as opposed to such factors as maturation, pretesting, or other environmental effects.

B - C: Shows that TTU seniors have higher average ACT scores than freshmen of four years earlier, suggesting that the more able students get to be TTU seniors, while those with less ability are less likely to reach the senior year.

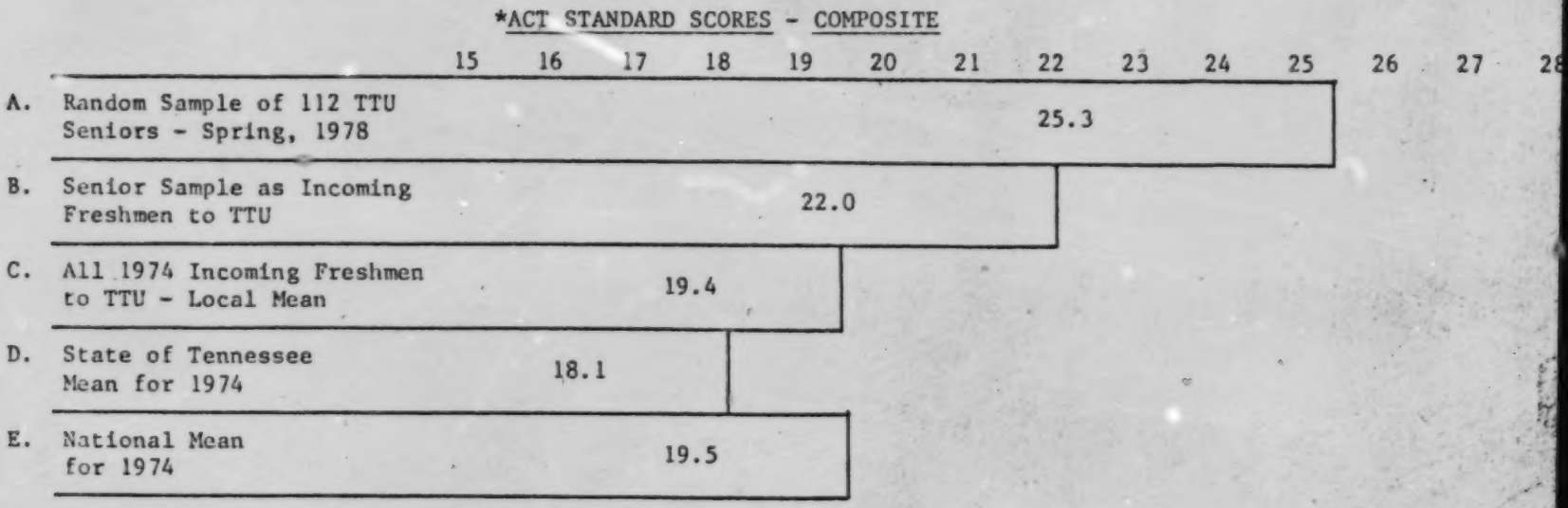
C - D: Shows that freshmen entering TTU have higher average ACT scores than other entering freshmen in Tennessee

C - E: Shows that freshmen entering TTU have ACT scores which are slightly higher than the national average.

ANALYSIS - The American College Testing Program describes this test as one "...that measures interpretation, analyzation, evaluation, critical reasoning, and problem-solving skills required in the natural sciences." Like the Social Studies Reading Test, a full 70% of the items are based on reading passages, requiring reading comprehension and related skills.

Tennessee Tech students compare favorably with national averages; the data are also suggestive of gains in the development of effective reading abilities while at TTU.

RESULTS - ACT Composite Score to Assess the Development of Essential Communication Skills.


*ACT STANDARD SCORES - COMPOSITE
15 16 17 18 19 20 21 22 23 24 25 26 27 28
A. Random Sample of 112 TTU Seniors - Spring, 1978
25.3
B. Senior Sample as Incoming Freshmen to TTU
22.0
C. All 1974 Incoming Freshmen to TTU - Local Mean
19.4
D. State of Tennessee Mean for 1974
18.1
E. National Mean for 1974
19.5

*In the interest of strictest possible comparability, all raw score-to-standard score conversions are based on grade twelve conversion tables.

A - B: Shows gain in performance on ACT by sample of seniors since entering TTU. In the absence of a control sample, however, it is not possible to specify what proportion of the gain is due to instructional effects as opposed to such factors as maturation, pretesting, or other environmental effects.

B - C: Shows that TTU seniors have higher average ACT scores than freshmen of four years earlier, suggesting that the more able students get to be TTU seniors, while those with less ability are less likely to reach the senior year.

C - D: Shows that freshmen entering TTU have higher average ACT scores than other entering freshmen in Tennesse

C - E: Shows that freshmen entering TTU have ACT scores which are approximately equal to the national average.

ANALYSIS - The ACT Composite Score is simply the average of scores on the four sub-tests: English Usage; Mathematics Usage; Social Studies Reading; and Natural Sciences Reading. As such, it may be interpreted usefully as an indicator of Essential Communication Skills.

Tennessee Tech students compare favorably with national averages; the data are also suggestive of gains in essential communication skills while at TTU.

RESULTS - ACT COMP to Assess the Development of Essential Communication Skills.

The ACT COMP (College Outcome Measures Project), which is still in experimental-developmental form, attempts to assess the ability to use and apply skills believed to be important for a variety of adult roles outside college. The American College Testing Program describes COMP as "...a difficult test because it measures life-long skills and concepts a graduate from college might have."

An important skill area assessed by COMP is that of COMMUNICATING: "Ability to send and receive information in a variety of modes (written, graphic, oral) for a variety of purposes (to inform, to persuade, to analyze)."

The COMMUNICATING skills of the random sample of TTU seniors were tested in two COMP domains:

Communicating about Social Institutions: "Ability to send and receive information (including numeric and graphic material) related to activities and institutions which constitute the social aspects of a culture."

Communicating about Science and Technology: "Ability to send and receive information (including numeric and graphic materials) related to the scientific/technological aspects of a culture."

The performance of the random sample of TTU seniors in the two domains was as follows:

	RANGE OF POSSIBLE SCORES	AVERAGE SCORE OF ACT NORMATIVE GROUP	AVERAGE SCORE OF TTU SENIORS	PERCENTILE EQUIVALENT OF TTU SENIOR AVERAGE
Communicating about Social Institutions	0 - 24	10.9[illegible]	11.28	62
Communicating about Science and Technology	0 - 24	10.74	11.70	67

ANALYSIS - TTU seniors compare favorably in the development of essential communication skills with available normative data: In Communicating about Social Institutions, their average score means that they performed at a higher level than 62% of all students in the ACT COMP Normative Group; while in Communicating about Science and Technology, their average score means that they performed at a higher level than 67% of all students in the ACT COMP Normative Group.

RESULTS - Student and Alumni Surveys to Assess the Development of Effective Writing Abilities.

In both the Student and Alumni Surveys, the following questions were asked:

"In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas?"

"How important do you think it is for a person with your career or educational plans to make progress in these same areas?"

Student and Alumni reported progress in the development of Effective Writing Abilities are summarized as follows:

	PERCENT RESPONDING			
	MUCH OR VERY MUCH PROGRESS	MODERATE PROGRESS	LITTLE OR NO PROGRESS	TOTAL PERCENT
All Seniors Surveyed (N=751)	37	43	20	100
Seniors Attributing Much or Very Much Importance to Making Progress in Writing Ability (N=583, which is 78% of all seniors surveyed)	43	40	17	100
All Alumni Surveyed (N=529)	33	49	18	100
Alumni Attributing Much or Very Much Importance to Making Progress in Writing Ability (N=433, which is 82% of all alumni surveyed)	37	46	17	100

ANALYSIS - Survey results are suggestive of satisfactory progress in the development of effective writing abilities, with approximately 80% of both Seniors and Alumni reporting at least moderate progress. The fact that approximately 17% of those attributing much or very much importance to the development of effective writing abilities report little or no progress indicates need for some improvement, however.

RESULTS - Student and Alumni Surveys to Assess the Development of Effective Reading Abilities.

In both the Student and Alumni Surveys, the following questions were asked:

"In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas?"

"How important do you think it is for a person with your career or educational plans to make progress in these same areas?"

Student and Alumni reported progress in the development of Effective Reading Abilities are summarized as follows:

	PERCENT RESPONDING			
	MUCH OR VERY MUCH PROGRESS	MODERATE PROGRESS	LITTLE OR NO PROGRESS	TOTAL PERCENT
All Seniors Surveyed (N=751)	28	47	25	100
Seniors Attributing Much or Very Much Importance to Making Progress in Reading Ability (N=656, which is 88% of all seniors surveyed)	30	48	22	100
All Alumni Surveyed (N=529)	27	48	25	100
Alumni Attributing Much or Very Much Importance to Making Progress in Reading Ability (N=477, which is 90% of all alumni surveyed)	28	47	25	100

ANALYSIS - Survey results are suggestive of satisfactory progress in the development of effective reading abilities, with approximately 75% of both Seniors and Alumni reporting at least moderate progress. However, the need for some improvement is indicated by the fact that approximately 25% of those attributing much or very much importance to the development of effective reading abilities report little or no progress.

RESULTS - Student and Alumni Surveys to Assess the Development of Effective Speaking Abilities.

In both the Student and Alumni Surveys, the following questions were asked:

"In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas?"

"How important do you think it is for a person with your career or educational plans to make progress in these same areas?"

Student and Alumni reported progress in the development of Effective Speaking Abilities are summarized as follows:

	PERCENT RESPONDING			
	MUCH OR VERY MUCH PROGRESS	MODERATE PROGRESS	LITTLE OR NO PROGRESS	TOTAL PERCENT
All Seniors Surveyed (N=751)	40	39	21	100
Seniors Attributing Much or Very Much Importance to Making Progress in Speaking Ability (N=620, which is 83% of all seniors surveyed)	44	39	17	100
All Alumni Surveyed (N=529)	39	41	20	100
Alumni Attributing Much or Very Much Importance to Making Progress in Speaking Ability (N=468, which is 88% of all alumni surveyed)	42	40	18	100

ANALYSIS - Survey results are suggestive of satisfactory progress in the development of effective speaking abilities, with approximately 80% of both Seniors and Alumni reporting at least moderate progress. However, the need for some improvement is indicated by the fact that approximately 18% of those attributing much or very much importance to the development of effective speaking abilities report little or no progress.

RESULTS - Student and Alumni Surveys to Assess the Development of Effective Mathematical Abilities.

In both the Student and Alumni Surveys, the following questions were asked:

"In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas?"

"How important do you think it is for a person with your career or educational plans to make progress in these same areas?"

Student and Alumni reported progress in the development of Effective Mathematical Abilities are summarized as follows:

	PERCENT RESPONDING			
	MUCH OR VERY MUCH PROGRESS	MODERATE PROGRESS	LITTLE OR NO PROGRESS	TOTAL PERCENT
All Seniors Surveyed (N=751)	39	34	27	100
Seniors Attributing Much or Very Much Importance to Making Progress in Mathematical Ability (N=468, which is 63% of all seniors surveyed)	55	31	14	100
All Alumni Surveyed (N=529)	40	35	25	100
Alumni Attributing Much or Very Much Importance to Making Progress in Mathematical Ability (N=345, which is 65% of all alumni surveyed)	50	35	15	100

ANALYSIS - Survey results are suggestive of satisfactory progress in the development of effective mathematical abilities, with approximately 75% of both Seniors and Alumni reporting at least moderate progress. Among those attributing much or very much importance to making progress in the development of mathematical abilities, the percentage reporting at least moderate progress increases to approximately 85%.

RESULTS - Selected Data on Institutional Activity to Assess the Development of Essential Communication Skills.

During the course of its day to day operations, the University is a setting for a wide variety of events and activities which may be viewed as contributing to the development of essential communication skills. The data reported here should be considered as only a sampling of activities, events and other indications of a major institutional commitment to goal attainment. Additional information and detail are available from the Project Director or appropriate University offices upon request.

Some of the information available on activities and events of recent Quarters (Spring, 1977; Fall, 1977; and Winter, 1978) which are indications of or which contribute to the development of Essential Communication Skills are as follows:

During the three recent quarters, the University enrolled a total of 9,648 students in one or more University-wide required English courses. A total of 76% of enrolled students received grades of 'C' or better, indicating satisfactory course completion.

The University requires of all of its undergraduate students demonstrated proficiency in written English. Those students failing to attain a 2.6 average in their 6 required Freshman and Sophomore English courses must take the English Qualifying Exam (EQE) and pass it as a requirement for the baccalaureate degree. Data from recent quarters reveal that approximately 100 to 250 students register for the EQE, with 55% to 65% receiving grades (by three readers) of 'S' (Satisfactory).

For those students who fail to perform satisfactorily on the EQE or who are referred by faculty to remove writing deficiencies, the University maintains an English Laboratory for remedial work. Utilization of the lab has increased by approximately 46% over the three recent quarters, with a total of 2,000 students taking advantage of opportunities provided by the facility.

The University's Honors Program, which has recently completed its second full year of operation, is intended to stimulate the academically gifted student to achieve his or her full potential. In the Fall of 1977 a comparative evaluation of Honors and regular classes was performed. That systematically conducted study revealed that students enrolled in Honors classes felt more strongly that there was adherence to the stated objectives of the course, that teaching methods were conducive to learning, and that the classroom atmosphere promoted creative thinking. A total of 365 students were enrolled in Honors classes during the recent three quarters, with 84% receiving 'A' or 'B' grades.

The preparation and publication of student newspapers and magazines provided opportunities for 73 students to enhance in an applied and meaningful way their creative writing abilities.

As testimony to its commitment to international understanding and cooperation and to the promotion of diversity in its student body, the University offers English as a Second Language (ESL) courses, and it has recently established an English Langauge Institute (ELI). During the three recent quarters, a total of 229 foreign students enrolled in ESL courses with over two-thirds (68%) receiving grades of 'C' or better, indicating satisfactory course completion.

All new freshmen whose ACT subtest scores both in English and Social Science are below 17 are required to take the University's College Reading Improvement Program. That program utilizes the Nelson-Denny Reading Test for diagnostic purposes. During the three recent quarters, a total of 725 students participated in the program, with 85% completing satisfactorily.

From July 1, 1976 to June 30, 1977, a total of 66,564 books were checked out of the University Library. Comparative statistics, which might allow for meaningful interpretation of this statistic, are not available.

Recently, the University's Division of Student Services conducted a sample survey of the University undergraduate student body utilizing the Educational Testing Service's College Student Questionnaire (CSQ). The sample consisted of 100 upperclass students, selected so as to be representative of the five colleges. Certain of the survey questions relate to the development of effective communciation skills (reading), and the responses are summarized here:

> When queried as to "How many of the following have you read: James Joyce, Leo Tolstoy, Thomas Mann?" 57% of TTU students as compared with 71% of the CSQ National Sample answered at least one.
>
> When they were asked "Do you enjoy <u>reading</u> poetry?" 61% of TTU students as compared with 59% nationally answered in the affirmative.
>
> When asked how many books they owned (not counting textbooks) 69% of TTU students reported owning at least ten. This compared to 74% for the CSQ National Sample.

The development of effective speaking abilities is, of course, most highly developed in those situations where students are required to articulate ideas to clearly inform and to persuade others. The University has an earned reputation for excellence in its Debate and Theatre Programs. During the recent academic year, the theatrical productions involved 65 students and 202 students participated in scheduled speech or debate activities. Several hundred students were also involved with a wide variety of student/campus related speech activities.

Participation in organizational leadership roles constitutes another very effective way of developing effective speaking abilities. During the past year, approximately 390 students obtained experience in leadership roles where formal speaking and/or discussion was required.

During the three recent quarters, the University enrolled a total of 1,793 students in its basic (freshman level) widely-required mathematics courses. A grade of 'C' or better was earned by 66% of all students enrolled, indicating satisfacory course completion.

A total of 376 students participated in activities or organizations which contributed to the development of effective mathematical abilities, ranging from the Mathematics Club to the Society for Advancement of Finance and Economics.

ANALYSIS - The above admittedly and necessarily partial listing of activities, events and facts indicate a very serious and substantial University commitment to ensuring that its students are afforded a wide variety of rich and substantial opportunities for the development of essential communication skills.

GOAL AREA - To ensure that students develop basic understandings of history and of the social sciences.

SPECIFIC GOALS - Basic Understandings of Democracy and Citizenship
Basic Understandings of History and Geography
Basic Understandings of Economics
Basic Understandings of the Behavioral Sciences

INDICATORS - Extra-Institutional Standardized Tests:

ACT scores of a sample of seniors as compared with those at entry.

Performance of a sample of seniors on ACT's COMP (College Outcome Measures Project).

Student and Alumni Surveys:

Student and alumni reported satisfaction with the development of basic understandings of history and of the social sciences as determined by surveys.

Selected Data on Institutional Activity:

Student enrollments and performances in University-wide required History courses and in social science courses.

Student enrollments, performances and evaluations of Honors Courses.

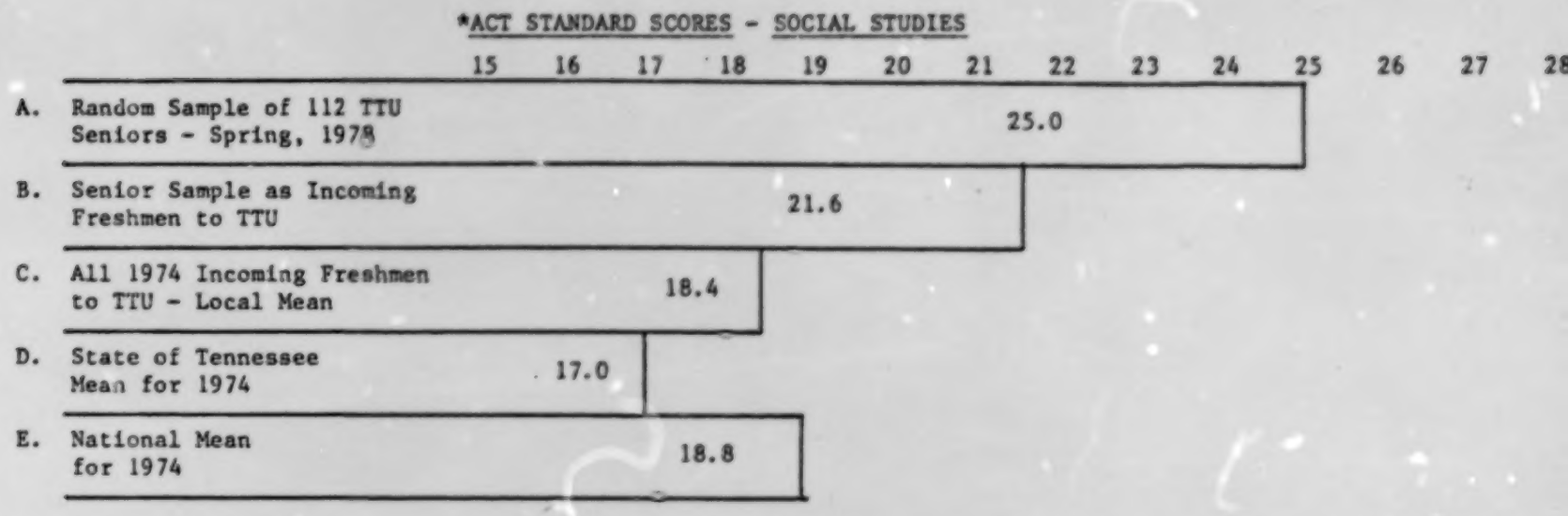
Student responses to selected questions on ETS's CSQ (Educational Testing Service's College Student Questionnaire).

ASSESSMENT - Extra-Institutional Standardized Tests were administered to a stratified random sample of 112 seniors on March 28, 1978.

Student and Alumni Surveys were conducted during the Spring Quarter, 1978. A total of 751 enrolled seniors responded, representing a 75% response rate. A total of 529 recent alumni (class of 1977) responded, representing a 64% response rate.

Selected Data on Institutional Activity were compiled for the following recent Quarters: Spring, 1977; Fall, 1977; and Winter, 1978.

RESULTS - ACT Social Studies Reading Test to Assess the Development of Basic Understandings of History and of the Social Sciences.


*ACT STANDARD SCORES - SOCIAL STUDIES
15 16 17 18 19 20 21 22 23 24 25 26 27 28
A. Random Sample of 112 TTU Seniors - Spring, 1978
25.0
B. Senior Sample as Incoming Freshmen to TTU
21.6
C. All 1974 Incoming Freshmen to TTU - Local Mean
18.4
D. State of Tennessee Mean for 1974
17.0
E. National Mean for 1974
18.8

*In the interest of strictest possible comparability, all raw score-to-standard score conversions are based on grade twelve conversion tables.

A - B: Shows gain in performance on ACT by sample of seniors since entering TTU. In the absence of a control sample, however, it is not possible to specify what proportion of the gain is due to instructional effects as opposed to such factors as maturation, pretesting, or other environmental effects.

B - C: Shows that TTU seniors have higher average ACT scores than freshmen of four years earlier, suggesting that the more able students get to be TTU seniors, while those with less ability are less likely to reach the senior year.

C - D: Shows that freshmen entering TTU have higher average ACT scores than other entering freshmen in Tennessee.

C - E: Shows that freshmen entering TTU have ACT scores which are approximately equal to the national average.

ANALYSIS - The American College Testing Program describes this test as one "...that measures comprehension, analytical and evaluative reasoning, and problem-solving skills required in the social studies." Areas covered include "History," "Government," "Economics," "Sociology and Anthropology," and "Psychology."

Tennessee Tech students compare favorably with national averages; the data are also suggestive of gains in the development of basic understandings of history and of the social sciences while at TTU.

RESULTS - ACT COMP to Assess the Development of Basic Understandings of History and of the Social Sciences.

The ACT COMP (College Outcome Measures Project), which is still in experimental-developmental form, attempts to assess the ability to use and apply skills believed to be important for a variety of adult roles outside college. The American College Testing Program describes COMP as "...a difficult test because it measures life-long skills and concepts a graduate from college might have."

An important skill area assessed by COMP is that of FUNCTIONING WITHIN SOCIAL INSTITUTIONS: "Ability to identify those activities and institutions which constitute the social aspects of a culture, understand the impact that social institutions have on individuals, and analyze one's own and others' personal functioning within social institutions."

The FUNCTIONING WITHIN SOCIAL INSTITUTIONS skills of the random sample of TTU seniors were tested in two COMP domains:

Communicating about Social Institutions: "Ability to send and receive information (including numeric and graphic material) related to activities and institutions which constitute the social aspects of a culture."

Solving Social Problems: "Ability to define problems of functioning within social institutions and select approaches to solve problems, generate solutions, collect information, check logical consistency, select a good solution, and evaluate the process by which a problem was solved."

The performance of the random sample of TTU seniors in the two domains was as follows:

	RANGE OF POSSIBLE SCORES	AVERAGE SCORE OF ACT NORMATIVE GROUP	AVERAGE SCORE OF TTU SENIORS	PERCENTILE EQUIVALENT OF TTU SENIOR AVERAGE
Communicating about Social Institutions	0 - 24	10.96	11.28	62
Solving Social Problems	0 - 32	13.70	13.92	52

ANALYSIS - TTU seniors compare favorably in the development of basic understandings of history and of the social sciences with available normative data: In Communicating about Social Institutions, their average score means that they performed at a higher level than 62% of all students in the ACT COMP Normative Group; while in Solving Social Problems, their average score means that they performed at a higher level than 52% of all students in the ACT COMP Normative Group.

RESULTS - Student and Alumni Surveys to Assess the Development of Basic Understandings of Democracy and Citizenship.

In both the Student and Alumni Surveys, the following questions were asked:

"In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas?"

"How important do you think it is for a person with your career or educational plans to make progress in these same areas?"

Student and Alumni reported progress in the development of Basic Understandings of Democracy and Citizenship are summarized as follows:

	PERCENT RESPONDING			
	MUCH OR VERY MUCH PROGRESS	MODERATE PROGRESS	LITTLE OR NO PROGRESS	TOTAL PERCENT
All Seniors Surveyed (N=751)	28	38	34	100
Seniors Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N= 375, which is 50% of all seniors surveyed)	42	35	23	100
All Alumni Surveyed (N=529)	28	35	37	100
Alumni Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=236, which is 45% of all alumni surveyed)	39	36	25	100

ANALYSIS - Survey results suggest at least moderate progress in the development of basic understandings of democracy and citizenship for approximately 65% of Alumni and Students. Although the data indicate need for improvement, it is encouraging to observe that approximately 75% of those attributing much or very much importance to making progress toward the goal report at least moderate progress.

RESULTS - Student and Alumni Surveys to Assess the Development of Basic Understandings of History and Geography.

In both the Student and Alumni Surveys, the following questions were asked:

"In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas?"

"How important do you think it is for a person with your career or educational plans to make progress in these same areas?"

Student and Alumni reported progress in the development of Basic Understandings of History and Geography are summarized as follows:

	PERCENT RESPONDING			
	MUCH OR VERY MUCH PROGRESS	MODERATE PROGRESS	LITTLE OR NO PROGRESS	TOTAL PERCENT
All Seniors Surveyed (N=751)	34	40	26	100
Seniors Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=219, which is 29% of all seniors surveyed)	60	28	12	100
All Alumni Surveyed (N=529)	36	39	25	100
Alumni Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N= 166, which is 32% of all alumni surveyed)	59	30	11	100

ANALYSIS - Survey results are suggestive of satisfactory progress in the development of basic understandings of history and geography, with approximately 75% of both Seniors and Alumni reporting at least moderate progress. Among those attributing much or very much importance to making progress toward the specified goal, the percentage reporting at least moderate progress increases to approximately 88%.

RESULTS - Student and Alumni Surveys to Assess the Development of Basic Understandings of Economics.

In both the Student and Alumni Surveys, the following questions were asked:

"In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas?"

"How important do you think it is for a person with your career or educational plans to make progress in these same areas?"

Student and Alumni reported progress in the development of Basic Understandings of Economics are summarized as follows:

	PERCENT RESPONDING			
	MUCH OR VERY MUCH PROGRESS	MODERATE PROGRESS	LITTLE OR NO PROGRESS	TOTAL PERCENT
All Seniors Surveyed (N=751)	36	29	35	100
Seniors Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=443, which is 59% of all seniors surveyed)	54	26	20	100
All Alumni Surveyed (N=529)	32	31	37	100
Alumni Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=287, which is 54% of all alumni surveyed)	46	30	24	100

ANALYSIS - Survey results suggest at least moderate progress in the development of basic understandings of economics for approximately 65% of Alumni and Students. Although the data indicate need for improvement, it is encouraging to observe that 75% to 80% of those attributing much or very much importance to making progress toward the goal report at least moderate progress.

RESULTS - Student and Alumni Surveys to Assess the Development of Basic Understandings of the Behavioral Sciences.

In both the Student and Alumni Surveys, the following questions were asked:

"In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas?"

"How important do you think it is for a person with your career or educational plans to make progress in these same areas?"

Student and Alumni reported progress in the development of Basic Understandings of the Behavioral Sciences are summarized as follows:

	PERCENT RESPONDING			
	MUCH OR VERY MUCH PROGRESS	MODERATE PROGRESS	LITTLE OR NO PROGRESS	TOTAL PERCENT
All Seniors Surveyed (N=751)	48	32	20	100
Seniors Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=367, which is 49% of all seniors surveyed)	70	23	7	100
All Alumni Surveyed (N=529)	44	34	22	100
Alumni Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=280, which is 53% of all alumni surveyed)	62	28	10	100

ANALYSIS - Survey results are suggestive of satisfactory progress in the development of basic understandings of the behavioral sciences, with approximately 80% of both Seniors and Alumni reporting at least moderate progress. Among those attributing much or very much importance to making progress toward the specified goal, the percentage reporting at least moderate progress increases to 90% to 93%.

RESULTS - Selected Data on Institutional Activity to Assess the Development of Basic Understandings of History and of the Social Sciences.

During the course of its day to day operations, the University is a setting for a wide variety of events and activities which may be viewed as contributing to the development of basic understandings of history and of the social sciences. The data reported here should be considered as only a sampling of activities, events and other indications of a major institutional commitment to goal attainment. Additional information and detail are available from the Project Director or appropriate University offices upon request.

Some of the information available on activities and events of recent Quarters (Spring, 1977; Fall, 1977; and Winter, 1978) which are indications of or which contribute to the development of Basic Understandings of History and of the Social Sciences are as follows:

During the three recent quarters, the University enrolled a total of 11,449 students in University-wide required History courses and in Social Science courses. A total of 74% of enrolled students received grades of 'C' or better, indicating satisfactory course completion.

The University's Honors Program, which has recently completed its second full year of operation, is intended to stimulate the academically gifted student to achieve his or her full potential. In the Fall of 1977 a comparative evaluation of Honors and regular classes was performed. That systematically conducted study revealed that students enrolled in Honors classes felt more strongly that there was adherence to the stated objectives of the course, that teaching methods were conducive to learning, and that the classroom atmosphere promoted creative thinking. Of the 365 students enrolled in Honors classes during the three recent quarters, 131 were studying either history or one of the social sciences. Grades of 'A' or 'B' were earned by 85% of the students enrolled in Honors sections of history or social science.

Recently, the University's Division of Student Services conducted a sample survey of the University undergraduate student body utilizing the Educational Testing Service's College Student Questionnaire (CSQ). The sample consisted of 100 upperclass students, selected so as to be representative of the five colleges. Certain of the survey questions relate to the development of basic understandings of history and of the social sciences, and the responses are summarized here:

The question was asked "Speaking generally, how satisfied are you with the degree of concern about political, economic, and social issues shown by most students at this college?" Responses showed that 60% of TTU students as compared with 52% of the CSQ National Sample indicated that they were either "fairly" or "very" satisfied.

In answer to the question "How informed do you presently consider yourself in regard to national and international political affairs?" 64% of TTU students responded "fairly" or "very" well informed. This compared with 62% for the CSQ National Sample.

When asked "How interested are you in political affairs?" 60% of TTU students as compared with 62% of the national sample answered that they were "quite" or "very" interested.

An important goal of the study of history and social science, which is widely held and often articulated, is the development of a sense of social awareness and responsibility. The ETS's CSQ allows the calculation of student scores on something that it identifies as the Social Conscience Scale (SC). Social conscience is defined as "...moral concern about perceived social injustice and what might be called 'institutional wrongdoing' (as in government, business, unions)." High scorers "...express concern about poverty, illegitimacy, juvenile crime, materialism, unethical business and labor union practices, graft in government, and the like." Low scorers "...represent reported lack of concern, detachment, or apathy about these matters." The following summary statistics suggest that TTU students score very high relatively on the Social Conscience Scale:

TTU Sample Mean	National Sample Mean	Standard Deviation	TTU Sample Percentile
30.02	29.30	.3	99

During the past academic year, University students participated in a wide variety of activities and events which provided opportunities to learn about human and group behavior and to develop interaction, leadership and problem-solving skills. Some indication of the beadth of activities and events is provided by the following selected summary statistics:

80 students participated in standing faculty committees

86 students participated in the annual seminar for officers of clubs and organizations

1,700 individuals, many of whom were TTU students, observed displays and interacted with international students representing 20 foreign countries

400 attended the Eight Annual Host Family Banquet

325 students attended the International Film Festival, viewing documentary films from eight countries

17 students particpated in the Tennessee Intercollegiate State Legislature and 11 in the Model United Nations

211 students were involved in co-curricular activities emphasizing economics, such as the professional business fraternity, the honor society in business, and the several committees of the University Programming Council

50 students were enrolled in the "Peer Counseling Program"

224 students were involved in non-credit developmental programs, such as those in "Human Relations," "Cross-Cultural Workshop," "Human Understanding Group," "Death and Dying," for example.

ANALYSIS - The above admittedly and necessarily partial listing of activities, events and facts indicates a very serious and substantial University commitment to ensuring that its students are afforded a wide variety of rich and substantial opportunities for the development of basic understandings of history and of the social sciences.

GOAL - To ensure that students develop basic understandings of science and technology.

INDICATORS - Extra-Institutional Standardized Tests:

ACT Scores of a sample of seniors as compared with those at entry.

Performance of a sample of seniors on ACT's COMP (College Outcome Measures Project).

Student and Alumni Surveys:

Student and alumni reported satisfaction with the development of basic understandings of science and technology as determined by surveys.

Selected Data on Institutional Activity:

Student enrollments and performances in basic science courses.

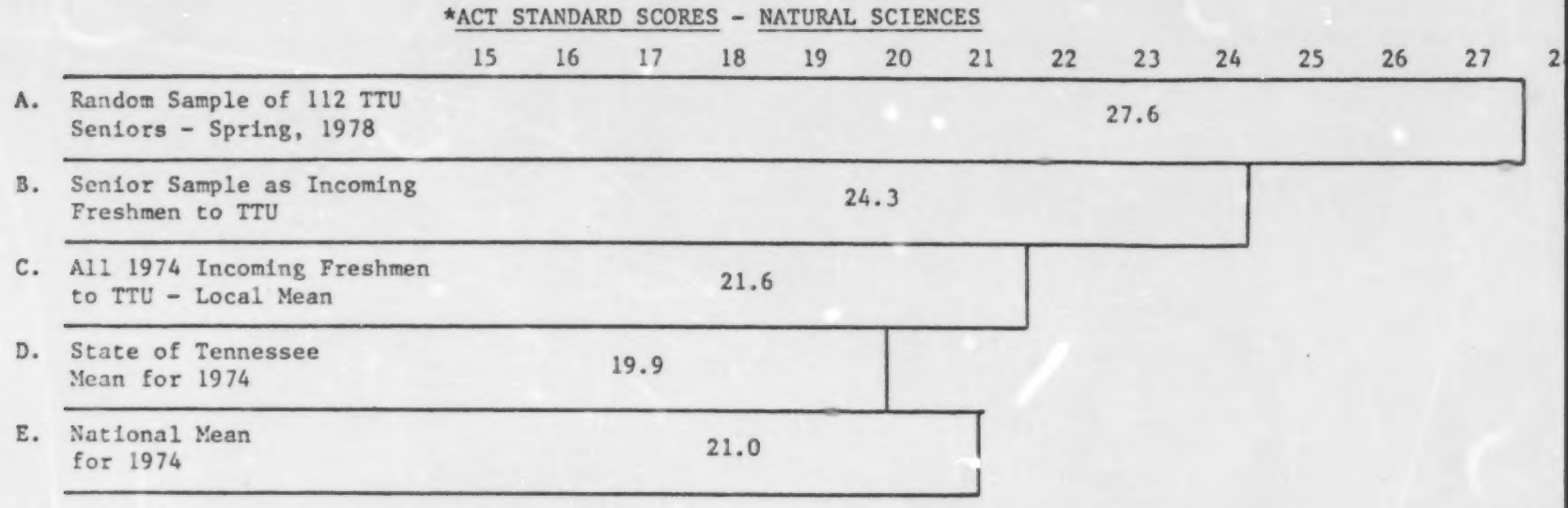
Student enrollments, performances and evaluations of Honors Courses.

ASSESSMENT - Extra-Institutional Standardized Tests were administered to a stratified random sample of 112 seniors on March 28, 1978.

Student and Alumni Surveys were conducted during the Spring Quarter, 1978. A total of 751 enrolled seniors responded, representing a 75% response rate. A total of 529 recent alumni (class of 1977) responded, representing a 64% response rate.

Selected Data on Institutional Activity were compiled for the following recent Quarters: Spring, 1977; Fall, 1977; and Winter, 1978.

RESULTS - ACT Natural Sciences Reading Test to Assess the Development of Basic Understandings of Science and Technology.


*ACT STANDARD SCORES - NATURAL SCIENCES
15 16 17 18 19 20 21 22 23 24 25 26 27
A. Random Sample of 112 TTU Seniors - Spring, 1978
27.6
B. Senior Sample as Incoming Freshmen to TTU
24.3
C. All 1974 Incoming Freshmen to TTU - Local Mean
21.6
D. State of Tennessee Mean for 1974
19.9
E. National Mean for 1974
21.0

*In the interest of strictest possible comparability, all raw score-to-standard score conversions are based on grade twelve conversion tables.

A - B: Shows gain in performance on ACT by sample of seniors since entering TTU. In the absence of a control sample, however, it is not possible to specify what proportion of the gain is due to instructional effects as opposed to such factors as maturation, pretesting, or other environmental effects.

B - C: Shows that TTU seniors have higher average ACT scores than freshmen of four years earlier, suggesting that the more able students get to be TTU seniors, while those with less ability are less likely to reach the senior year.

C - D: Shows that freshmen entering TTU have higher average ACT scores than other entering freshmen in Tennessee

C - E: Shows that freshmen entering TTU have ACT scores which are slightly higher than the national average.

ASSESSMENT - The American College Testing Program describes this test as one "...that measures interpretation, analyzation, evaluation, critical reasoning, and problem solving skills required in the natural sciences." Areas covered include "Biology," "Chemistry," "Physics," and "Physical Science."

Tennessee Tech students compare favorably with national averages; the data are also suggestive of gains in the development of basic understandings of science and technology while at TTU.

RESULTS - ACT COMP to Assess the Development of Basic Understandings of Science and Technology.

The ACT COMP (College Outcome Measures Project), which is still in experimental-developmental form, attempts to assess the ability to use and apply skills believed to be important for a variety of adult roles outside college. The American College Testing Program describes COMP as "...a difficult test because it measures life-long skills and concepts a graduate from college might have."

An important skill area assessed by COMP is that of USING SCIENCE AND TECHNOLOGY: "Ability to identify the scientific/technological aspects of a culture, understand the impact of such activities and products on individuals and the environment, and analyze the consequences of the use of technological products for one's own self and the culture."

The UNDERSTANDING SCIENCE AND TECHNOLOGY skills of the random sample of TTU seniors were tested in two COMP domains:

Communicating about Science and Technology: "Ability to send and receive information (including numeric and graphic materials) related to the scientific/technological aspects of a culture."

Solving Scientific and Technological Problems: "Ability to define problems related to scientific products and the use of technology in a culture, select approaches to solve problems, generate solutions, collect information, check logical consistency, select a good solution, and evaluate the process by which a problem was solved."

The performance of the random sample of TTU seniors in the two domains was as follows:

	RANGE OF POSSIBLE SCORES	AVERAGE SCORE OF ACT NORMATIVE GROUP	AVERAGE SCORE OF TTU SENIORS	PERCENTILE EQUIVALENT OF TTU SENIOR AVERAGE
Communicating about Science and Technology	0 - 24	10.74	11.70	67
Solving Scientific and Technological Problems	0 - 32	11.55	14.08	87

ANALYSIS - TTU seniors compare especially favorably in the development of basic understandings of science and technology with available normative data: In Communicating about Science and Technology, their average score means that they performed at a higher level than 67% of all students in the ACT COMP Normative Group; while in Solving Scientific and Technological Problems, their average score means that they performed at a higher level than 87% of all students in the ACT COMP Normative Group.

RESULTS - Student and Alumni Surveys to Assess the Development of Basic Understandings of Science and Technology.

In both the Student and Alumni Surveys, the following questions were asked:

"In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas?"

"How important do you think it is for a person with your career or educational plans to make progress in these same areas."

Student and Alumni reported progress in the development of Basic Understandings of Science and Technology are summarized as follows:

	PERCENT RESPONDING			
	MUCH OR VERY MUCH PROGRESS	MODERATE PROGRESS	LITTLE OR NO PROGRESS	TOTAL PERCENT
All Seniors Surveyed (N=751)	53	29	18	100
Seniors Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=429, which is 57% of all seniors surveyed)	76	19	5	100
All Alumni Surveyed (N=529)	54	30	16	100
Alumni Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=304, which is 57% of all alumni surveyed)	75	21	4	100

ANALYSIS - Survey results are suggestive of satisfactory progress in the development of basic understandings of science and technology, with over 80% of both Seniors and Alumni reporting at least moderate progress. Among those attributing much or very much importance to making progress toward the specified goal, the percentage reporting at least moderate progress increases to approximately 95%.

RESULTS - Selected Data on Institutional Activity to Assess the Development of Basic Understandings of Science and Technology.

During the course of its day to day operations, the University is a setting for a wide variety of events and activities which may be viewed as contributing to the development of basic understandings of science and technology. The data reported here should be considered as only a sampling of activities, events and other indications of a major institutional commitment to goal attainment. Additional information and detail are available from the Project Director or appropriate University offices upon request.

Some of the information available on activities and events of recent quarters (Spring, 1977; Fall, 1977; and Winter, 1978) which are indications of or which contribute to the development of Basic Understandings of Science and Technology are as follows:

During the three recent quarters, the University enrolled a total of 5,771 students in basic science courses (this figure excludes enrollments in engineering and agriculture courses). A total of 63% of enrolled students received grades of 'C' or better, indicating satisfactory course completion.

The University's Honors Program, which has recently completed its second full year of operation, is intended to stimulate the academically gifted student to achieve his or her full potential. In the Fall of 1977 a comparative evaluation of Honors and regular courses was performed. That systematically conducted study revealed that students enrolled in Honors classes felt more strongly that there was adherence to the stated objectives of the course, that teaching methods were conducive to learning, and that the classroom atmosphere promoted creative thinking. A total of 365 students were enrolled in Honors classes during the three recent quarters, with 84% receiving 'A' or 'B' grades. Although enrollments have been small, basic science courses are viewed as a very important component of the Honors Program.

A recent compilation of data by the Division of Student Services reveals that a total of 795 students participated in organizations or activities related to science and technology during the past academic year. Among these were included student branches of the various engineering professional societies and also science clubs, such as the Biology Club and the Chemical and Medical Science Club.

ANALYSIS - Through its offerings of basic science courses and through its programs in engineering and technology, the University provides a wide variety of opportunities for all of its students to develop basic understandings of these important areas.

GOAL AREA - To ensure that students develop problem-solving abilities.

SPECIFIC GOALS - Ability to reason or think critically
Informed acquaintance with major methods of inquiry

INDICATORS - Extra-Institutional Standardized Tests:

ACT Scores of a sample of seniors as compared with those at entry.

Performance of a sample of seniors on ACT's COMP (College Outcome Measures Project).

Student and Alumni Surveys:

Student and alumni reported satisfaction with the development of problem-solving abilities as determined by surveys.

Selected Data on Institutional Activity:

Student enrollments and performances in seminar, special topics and independent study courses.

Student enrollments, performances and evaluations of Honors courses.

Student enrollments and performances in Logic, Debate, Statistics, and other courses concerned "obviously" with developing critical thinking abilities.

To the extent they are available, student scores on the GRE's and Professional Exams (e.g., The National Teachers Examinations).

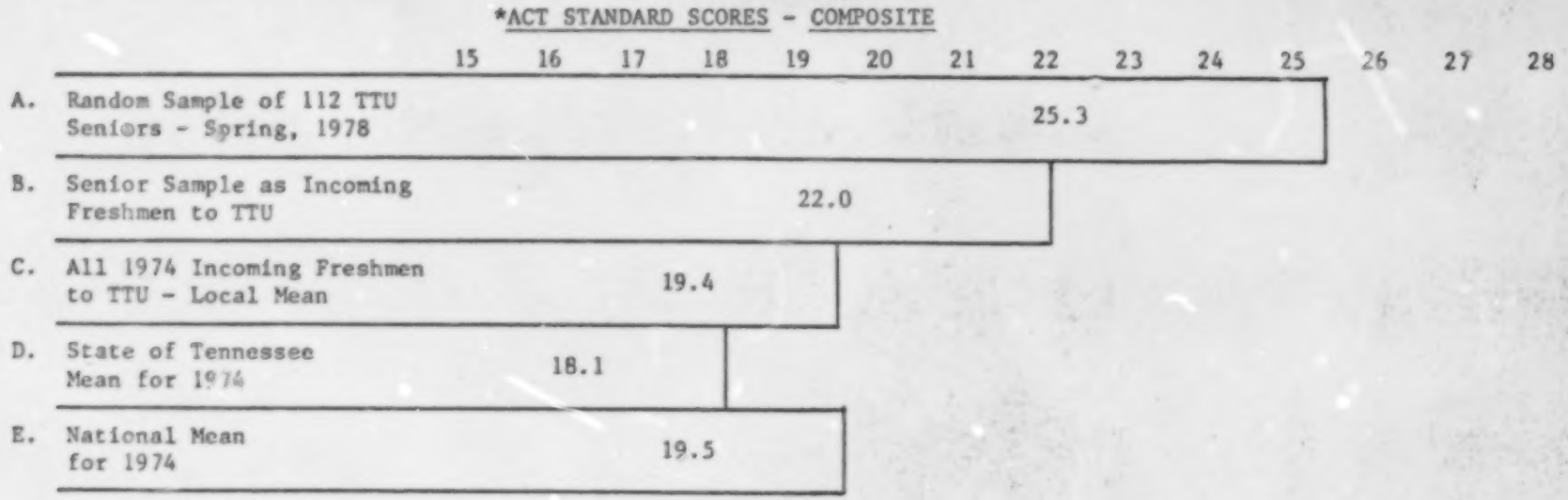
Student enrollments and performances in humanities, social sciences and natural sciences courses.

ASSESSMENT - Extra-Institutional Standardized Tests were administered to a stratified random sample of 112 seniors on March 28, 1978.

Student and Alumni Surveys were conducted during the Spring Quarter, 1978. A total of 751 enrolled seniors responded, representing a 75% response rate. A total of 529 recent alumni (class of 1977) responded, representing a 64% response rate.

Selected Data on Institutional Activity were compiled for the following recent Quarters: Spring, 1977; Fall, 1977; and Winter, 1978.

RESULTS - ACT Composite Score to Assess the Development of Problem-Solving Abilities.


*ACT STANDARD SCORES - COMPOSITE
15 16 17 18 19 20 21 22 23 24 25 26 27 28
A. Random Sample of 112 TTU Seniors - Spring, 1978
25.3
B. Senior Sample as Incoming Freshmen to TTU
22.0
C. All 1974 Incoming Freshmen to TTU - Local Mean
19.4
D. State of Tennessee Mean for 1974
18.1
E. National Mean for 1974
19.5

*In the interest of strictest possible comparability, all raw score-to-standard score conversions are based on grade twelve conversion tables.

A - B: Shows gain in performance on ACT by sample of seniors since entering TTU. In the absence of a control sample, however, it is not possible to specify what proportion of the gain is due to instructional effects as opposed to such factors as maturation, pretesting, or other environmental effects.

B - C: Shows that TTU seniors have higher average ACT scores than freshmen of four years earlier, suggesting that the more able students get to be TTU seniors, while those with less ability are less likely to reach the senior year.

C - D: Shows that freshmen entering TTU have higher average ACT scores than other entering freshmen in Tennessee.

C - E: Shows that freshmen entering TTU have ACT scores which are approximately equal to the national average.

ANALYSIS - The American College Testing Program describes their tests as containing "...a large proportion of analytical, problem-solving exercises and few measures of narrow skills." For example, the Mathematics Usage Test "emphasizes reasoning in a quantitaive context, rather than memorization;" the Social Studies Reading Test "measures comprehension, analytical and evaluative reasoning, and problem-solving skills;" and the Natural Sciences Reading Test "measures interpretation, analyzation, evaluation, critical reasoning, and problem-solving." The ACT Composite Score may therefore be interpreted usefully as an indicator of Problem-Solving Abilities.

Tennessee Tech students compare favorably with national averages; the data are also suggestive of gains in the development of problem-solving abilities while at TTU.

RESULTS - ACT COMP to Assess the Development of Problem-Solving Abilities.

The ACT COMP (College Outcome Measures Project), which is still in experimental-developmental form, attempts to assess the ability to use and apply skills believed to be important for a variety of adult roles outside college. The American College Testing Program describes COMP as "...a difficult test because it measures life-long skills and concepts a graduate from college might have."

An important skill area assessed by COMP is that of SOLVING PROBLEMS: "Ability to define a variety of problems, select approaches to solve them, generate solutions, collect information, check logical consistency, select a good solution, and evaluate the process by which a problem was solved."

The SOLVING PROBLEMS skills of the random sample of TTU seniors were tested in two COMP domains:

> Solving Social Problems: "Ability to define problems of functioning within social institutions and select approaches to solve problems, generate solutions, collect information, check logical consistency, select a good solution, and evaluate the process by which a problem was solved."
>
> Solving Scientific and Technological Problems: "Ability to define problems related to scientific products and the use of technology in a culture, select approaches to solve problems, generate solutions, collect information, check logical consistency, select a good solution, and evaluate the process by which a problem was solved."

The performance of the random sample of TTU seniors in the two domains was as follows:

	RANGE OF POSSIBLE SCORES	AVERAGE SCORE OF ACT NORMATIVE GROUP	AVERAGE SCORE OF TTU SENIORS	PERCENTILE EQUIVALENT OF TTU SENIOR AVERAGE
Solving Social Problems	0 - 32	13.70	13.92	52
Solving Scientific and Technological Problems	0 - 32	11.55	14.08	87

ANALYSIS - TTU seniors compare favorably in the development of problem-solving abilities with available normative data: In Solving Social Problems, their average score means that they performed at a higher level than 52% of all students in the ACT COMP Normative Group; while in Solving Scientific and Technological Problems, their average score means that they performed at a higher level than 87% of all students in the ACT COMP Normative Group.

RESULTS - Student and Alumni Surveys to Assess the Development of the Ability to Reason or Think Critically.

In both the Student and Alumni Surveys, the following questions were asked:

"In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas?"

"How important do you think it is for a person with your career or educational plans to make progress in these same areas?"

Student and Alumni reported progress in the development of the Ability to Reason or Think Critically are summarized as follows:

	PERCENT RESPONDING			
	MUCH OR VERY MUCH PROGRESS	MODERATE PROGRESS	LITTLE OR NO PROGRESS	TOTAL PERCENT
All Seniors Surveyed (N=751)	63	29	8	100
Seniors Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=689, which is 92% of all seniors surveyed)	67	27	6	100
All Alumni Surveyed (N=529)	62	29	9	100
Alumni Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=463, which is 88% of all alumni surveyed)	66	26	8	100

ANALYSIS - Survey results indicate satisfactory progress in the development of the ability to reason or think critically, with over 90% of both Alumni and Students reporting at least moderate progress and with nearly two-thirds reporting much or very much progress.

RESULTS - Student and Alumni Surveys to Assess the Development of an Informed Acquaintance with the Major Methods of Inquiry.

In both the Student and Alumni Surveys, the following questions were asked:

"In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas?"

"How important do you think it is for a person with your career or educational plans to make progress in these same areas?"

Student and Alumni reported progress in the development of an Informed Acquaintance with the Major Methods of Inquiry are summarized as follows:

	PERCENT RESPONDING			
	MUCH OR VERY MUCH PROGRESS	MODERATE PROGRESS	LITTLE OR NO PROGRESS	TOTAL PERCENT
All Seniors Surveyed (N=751)	33	46	21	100
Seniors Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=331, which is 44% of all seniors surveyed)	52	41	7	100
All Alumni Surveyed (N=529)	32	43	25	100
Alumni Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=231, which is 44% of all alumni surveyed)	49	41	10	100

ANALYSIS - Survey results are suggestive of satisfactory progress in the development of an informed acquaintance with the major methods of inquiry, with 75% of Alumni and 79% of Students reporting at least moderate progress. Among those attributing much or very much importance to making progress toward the specified goal, the corresponding percentages reporting at least moderate progress are 90% and 93%, respectively.

RESULTS - Selected Data on Institutional Activity to Assess the Development of Problem-Solving Abilities.

During the course of its day to day operations, the University is a setting for a wide variety of events and activities which may be viewed as contributing to the development of problem-solving abilities. The data reported here should be considered as only a sampling of activities, events and other indications of a major institutional commitment to goal attainment. Additional information and detail are available from the Project Director or appropriate University offices upon request.

Some of the information available on activities and events of recent Quarters (Spring, 1977; Fall, 1977; and Winter, 1978) which are indications of or which contribute to the development of Problem-Solving Abilities are as follows:

During the three recent quarters, the University enrolled a total of 1,581 students in seminar, special topics and independent study courses. A total of 92% of enrolled students earned grades of 'C' or better, indicating satisfactory course completion.

The University's Honors Program, which has recently completed its second full year of operation, is intended to stimulate the academically gifted student to achieve his or her full potential. In the Fall of 1977 a comparative evaluation of Honors and regular classes was performed. That systematically conducted study revealed that students enrolled in Honors classes felt more strongly that there was adherence to the stated objectives of the course, that teaching methods were conducive to learning, and that the classroom atmosphere promoted creative thinking. A total of 365 students were enrolled in Honors classes during the three recent quarters, with 84% receiving 'A' or 'B' grades.

During the three recent quarters, the University enrolled a total of 586 students in Logic, Debate and Statistics courses, that is, those courses concerned primarily with the development of critical thinking abilities. A total of 63% of enrolled students earned grades of 'C' or better, indicating satisfactory course completion.

Since readily available data on students' performances on the GRE's and Professional Exams exist only for graduate students enrolled at TTU, a decision was made to abandon attempts to compile such data for purposes of this project. Our focus throughout has been on instructional goals of undergraduate education.

During the three recent quarters, the University enrolled a total of 20,646 students in humanities, social sciences and natural sciences courses. A total of 71% of enrolled students earned grades of 'C' or better, indicating satisfactory course completion.

ANALYSIS - The above admittedly and necessarily partial listing of activities and facts indicates a very serious and substantial University commitment to ensuring that its students are afforded a wide variety of opportunities for the development of problem-solving abilities.

GOAL AREA - To ensure that students are prepared for further study and/or for employment.

SPECIFIC GOALS - Mastery of a field of knowledge to the level required for admission to and successful completion of graduate or professional school.

Mastery of a field of knowledge to the level required for successful employment in a desired occupation.

INDICATORS - Student and Alumni Surveys:

Student and alumni reported satisfaction with their preparation for further study and for employment as determined by surveys.

Numbers of alumni reporting going on to graduate and professional schools as determined by survey.

Numbers of alumni reporting gaining employment in a desired occupation as determined by survey.

ASSESSMENT - Student and Alumni Surveys were conducted during the Spring Quarter, 1978. A total of 751 enrolled seniors responded, representing a 75% response rate. A total of 529 recent alumni (class of 1977) responded, representing a 64% response rate.

RESULTS - Student and Alumni Surveys to Assess the Development of Background for Further Study.

In both the Student and Alumni Surveys, the following questions were asked:

"In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas?"

"How important do you think it is for a person with your career or educational plans to make progress in these same areas?"

Student and Alumni reported progress in the development of Background for Further Study are summarized as follows:

	PERCENT RESPONDING			
	MUCH OR VERY MUCH PROGRESS	MODERATE PROGRESS	LITTLE OR NO PROGRESS	TOTAL PERCENT
All Seniors Surveyed (N=751)	66	27	7	100
Seniors Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=581, which is 77% of all seniors surveyed)	73	22	5	100
All Alumni Surveyed (N=529)	64	30	6	100
Alumni Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=377, which is 71% of all alumni surveyed)	73	22	5	100

ANALYSIS - Survey results indicate satisfactory progress in the development of background for further study, with over 90% of both Alumni and Students reporting at least moderate progress and with nearly two-thirds reporting much or very much progress.

RESULTS - Alumni Survey to Assess Preparation for Further Study.

In the Alumni Survey, several specific questions were asked regarding experiences of the 529 recent alumni (Class of 1977) with their preparation for further study. The responses are summarized as follows:

Nearly one-third (32%) of the Class of 1977 report having enrolled in another degree program since receiving their Bachelor's degree from TTU.

Of those enrolled in another degree program, 85% report being at a school of their first choice.

Of those enrolled in another degree program, 81% are seeking Master's degrees, while 15% are working on Professional or Doctor's degrees, and 4% are enrolled in programs leading to another Bachelor's degree.

In response to the question, "How well did TTU prepare you for your new degree program?", 25% indicated "Excellent Preparation" and 51% reported "Good Preparation." Only 2% characterized their preparation as "Inadequate," and 22% said it was "Fair."

Of those enrolled in another degree program, the reported first-term grade point averages were:

Point Average	Percent
3.6 - 4.0	50%
3.1 - 3.5	27%
2.6 - 3.0	15%
2.1 - 2.5	5%
2.0 or less	3%

In response to the question, "Regardless of whether you are going on to another educational program at this time, what is the HIGHEST degree you eventually intend to complete?", TTU Alumni gave the following responses:

Highest Degree Sought	Percent
Doctor's or Professional	24%
Master's	52%
Bachelor's	15%
No response	9%

ANALYSIS - Responses of Alumni to several survey questions suggest generally positive results regarding preparation for further study.

RESULTS - Student and Alumni Surveys to Assess the Development of Background for Work.

In both the Student and Alumni Surveys, the following questions were asked:

"In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas?"

"How important do you think it is for a person with your career or educational plans to make progress in these same areas?"

Student and Alumni reported progress in the development of Background for Work are summarized as follows:

	PERCENT RESPONDING			
	MUCH OR VERY MUCH PROGRESS	MODERATE PROGRESS	LITTLE OR NO PROGRESS	TOTAL PERCENT
All Seniors Surveyed (N=751)	68	25	7	100
Seniors Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=676, which is 90% of all seniors surveyed)	72	23	5	100
All Alumni Surveyed (N=529)	58	32	10	100
Alumni Attributing Much or Very Much Importance to Making Progress toward Specified Goal (N=439, which is 83% of all alumni surveyed)	64	28	8	100

ANALYSIS - Survey results indicate satisfactory progress in the development of background for work, with over 90% of Students and Alumni reporting at least moderate progress and with nearly three-quarters of the Students and two-thirds of the Alumni for whom making progress is of much or very much importance reporting much or very much progress.

RESULTS - Alumni Survey to Assess Preparation for Employment.

In the Alumni Survey, several specific questions were asked regarding experiences of the 529 recent alumni (Class of 1977) with their preparation for employment. The responses are summarized as follows:

81% report having held a full-time job since receiving their Bachelor's degree from TTU.

The responses to the question, "How long after receiving your bachelor's degree from TTU did it take you to find your FIRST FULL-TIME job?" were:

48% obtained the job before graduation
32% took 2 months or less to find the job
16% took 3 to 6 months
3% took 7 months to 1 year
1% took over one year

Those having held a full-time job were asked, "To what extent was this job related to the major/program in which you were enrolled at TTU?" The responses were:

59% "Directly related"
23% "Somewhat related"
18% "Not related"

When clarifying questions were asked to learn why a job might not have been related to the alumnus' major program, it was discovered that only 12% of the recent alumni report being unable to find a job related to their program at TTU.

The question was asked, "How well do you feel TTU prepared you for this job?" The responses were:

19% "Excellent Preparation"
49% "Good Preparation"
25% "Fair Preparation"
7% "Inadequate Preparation"

When asked how they regarded their first full-time job, the alumni responded:

43% "Employment with DEFINITE career potential"
29% "Employment with POSSIBLE career potential"
28% "Temporary Employment"

Reported starting salaries on first full-time job were as follows:

1% $25,000 and above per year
12% $15,000 to $24,999 per year
33% $10,000 to $14,999 per year
33% $7,500 to $9,999 per year
11% $6,000 to $7,499 per year
10% Less than $6,000 per year

ANALYSIS - Responses of Alumni to several survey questions suggest generally positive results regarding preparation for employment.

APPENDIX

Contents: Alumni and Student Survey Questionnaires

Budget Allotment Summary

OFFICE Use Only	☐☐☐☐ ☐ ☐

TTU STUDENT QUESTIONNAIRE

ANSWERS TO ALL QUESTIONS ASKED IN THIS SURVEY WILL BE TREATED STRICTLY CONFIDENTIALLY

RESULTS WILL BE REPORTED ONLY IN A STATISTICAL MANNER. YOUR NAME WILL NEVER BE IDENTIFIED WITH ANY ANSWERS GIVEN.

1. NAME: (Please Print)

Last First Middle I.

2. Permanent Mailing Address:

Street and Number

City State Zip Code

3. Student Identification Number:
(Social Security Number)

☐☐☐ – ☐☐ – ☐☐☐☐

4. Sex: (check one)

1. ☐ Male
2. ☐ Female

5. Marital Status: (check one)

1. ☐ Single
2. ☐ Married
3. ☐ Widowed
4. ☐ Divorced

6. Age: (check one)

1. ☐ Under 18
2. ☐ 18-20
3. ☐ 21-24
4. ☐ 25-34
5. ☐ 35-44
6. ☐ 45-54
7. ☐ 55 years & over

7. Undergraduate College Affiliation at Tech: (check one)

1. ☐ College of Agriculture and Home Econ.
2. ☐ College of Arts and Sciences
3. ☐ College of Business Administration
4. ☐ College of Education
5. ☐ College of Engineering

8. Department Affiliation: (write-in; please print)

9. Major: (write-in; please print)

10. Did you transfer credits from another college or university toward your degree from TTU? (check one)

1. ☐ Yes
2. ☐ No

11. Were you primarily a full-time (12 hours or more) or part-time student while you attended TTU? (check one)

1. ☐ Primarily full-time
2. ☐ Primarily part-time

12. In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas? (check the appropriate box for each area)

A. Writing Ability: Your ability to write clearly, correctly, and effectively.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

B. Reading Ability: Your ability to clearly understand and comprehend what you read.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

CONTINUED →

QUESTION 12 – Continued

C. Speaking Ability: Your ability to speak clearly, correctly and effectively.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

D. Mathematical Ability: Your ability to make everyday calculations; to understand and use basic statistical data, probabilities, graphs and charts, etc.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

E. Understanding of Democracy and Citizenship: Your knowledge of government and awareness of your rights and responsibilities as a citizen.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

F. Understanding of History and Geography: Your understanding of past and present social and physical conditions of mankind and the natural world. Your awareness of self in time and place.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

G. Understanding of Science and Technology: Your understanding of scientific facts, principles and procedures and their technological applications.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

H. Understanding of Economics: Your knowledge of basic facts and principles of economics; which allow you to understand matters affecting costs, supply and demand, economic growth, inflation, unemployment, etc.; and which allow you to make intelligent choices and decisions as a consumer and citizen.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

I. Understanding of Literature: Your understanding and appreciation of literature. Your liking for reading and reading for enjoyment.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very Much progress

J. Understanding of the Behavioral Sciences: Your understanding of the basic concepts and generalizations of psychology, sociology, or anthropology. Your awareness of yourself as a member of groups and of your relationships with others; and your awareness of different cultures, values, beliefs, and ways of life.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

K. Reasoning and Critical Thinking: Your ability to recognize assumptions, make logical inferences, and reach correct conclusions. Your ability to withhold judgment, raise questions, and examine contrary views.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

L. Familiarity with Major Approaches to Human Knowledge: Your familiarity with the basic characteristics of and the differences between the scientific, social scientific, and humanistic approaches to human knowledge.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

M. Background for Further Study: Your preparation for further education or study through your specialization or major field (regardless of whether or not you actually have or plan to continue with further study).

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

N. Background for Work: Your preparation for a desired job or career through your specialization or major field (regardless of whether or not you actually have or plan to get a job or enter a career).

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

NOW THAT YOU HAVE ESTIMATED HOW MUCH PROGRESS YOU HAVE MADE, PLEASE INDICATE HOW IMPORTANT YOU THINK IT IS FOR A PERSON WITH YOUR CAREER OR EDUCATIONAL PLANS TO MAKE PROGRESS IN THESE SAME AREAS.

13. How important do you think it is for a person with your career or educational plans to make progress in these same areas? (check the appropriate box for each area)

A. Writing Ability: Your ability to write clearly, correctly, and effectively.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

CONTINUED →

QUESTION 13 – Continued

B. Reading Ability: Your ability to clearly understand and comprehend what you read.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

C. Speaking Ability: Your ability to speak clearly, correctly and effectively.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

D. Mathematical Ability: Your ability to make everyday calculations; to understand and use basic statistical data, probabilities, graphs and charts, etc.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

E. Understanding of Democracy and Citizenship: Your knowledge of government and awareness of your rights and responsibilities as a citizen.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

F. Understanding of History and Geography: Your understanding of past and present social and physical conditions of mankind and the natural world. Your awareness of self in time and place.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

G. Understanding of Science and Technology: Your understanding of scientific facts, principles and procedures and their technological applications.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

H. Understanding of Economics: Your knowledge of basic facts and principles of economics; which allow you to understand matters affecting costs, supply and demand, economic growth, inflation, unemployment, etc.; and which allow you to make intelligent choices and decisions as a consumer and citizen.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

I. Understanding of Literature: Your understanding and appreciation of literature. Your liking for reading and reading for enjoyment.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very Much import.

J. Understanding of the Behavioral Sciences: Your understanding of the basic concepts and generalizations of psychology, sociology, or anthropology. Your awareness of yourself as a member of groups and of your relationships with others; and your awareness of different cultures, values, beliefs, and ways of life.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

K. Reasoning and Critical Thinking: Your ability to recognize assumptions, make logical inferences, and reach correct conclusions. Your ability to withhold judgment, raise questions, and examine contrary views.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

L. Familiarity with Major Approaches to Human Knowledge: Your familiarity with the basic characteristics of and the differences between the scientific, social scientific, and humanistic approaches to human knowledge.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

M. Background for Further Study: Your preparation for further education or study through your specialization or major field (regardless of whether or not you actually have or plan to continue with further study).

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

N. Background for Work: Your preparation for a desired job or career through your specialization or major field (regardless of whether or not you actually have or plan to get a job or enter a career).

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

---

14. Are you currently working at or have you secured a full-time job (35 hours or more a week) in which you plan to work once you graduate? (check one)

1. ☐ Yes, I will continue working in my present job after I graduate.
2. ☐ Yes, I just recently obtained a new job that begins after I graduate.
3. ☐ No, but I am looking for a job.
4. ☐ No, but I intend to look for a job within the next six months.
5. ☐ No, and I do not intend to look for a job within the next six months.

15. Have you applied for admission to one or more educational programs (either here or at another school) which would result in your earning another degree? (check one)

1. ☐ Yes, I have applied.
2. ☐ No, but I intend to apply within the next six months.
3. ☐ No, and I do not intend to apply within the next six months.

CONTINUED ▸

16. Have you been accepted for any of the programs to which you have applied? (check one)

1. ☐ The question is not applicable to me because I have not applied to any schools.
2. ☐ Yes, I have been accepted.
3. ☐ No, all my applications have been rejected.
4. ☐ No, but I have not yet received a reply on all my applications.

17. Regardless of whether you are going on to another educational program at this time, what is the highest degree you eventually intend to complete? (check one)

1. ☐ Bachelor's degree
2. ☐ Master's degree
3. ☐ Professional degree (includes ONLY dentistry, medicine, optometry, osteopathy, podiatry, veterinary medicine, law, and theology)
4. ☐ Doctor's degree (e.g., Ph.D., Ed.D., D.B.A.)

Thank you for taking the time to fill out this questionnaire.

—Remember that answers to all questions will be treated STRICTLY CONFIDENTIALLY and that your name will NEVER be identified with any answers given.

Please place your completed questionnaire in the enclosed pre-addressed envelope and return through the campus mail — *AS SOON AS POSSIBLE* — to:

Director
Performance Funding Project
Box 5166
CAMPUS

QUESTION 12 – Continued

G. Understanding of Science and Technology: Your understanding of scientific facts, principles and procedures and their technological applications.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

H. Understanding of Economics: Your knowledge of basic facts and principles of economics; which allow you to understand matters affecting costs, supply and demand, economic growth, inflation, unemployment, etc.; and which allow you to make intelligent choices and decisions as a consumer and citizen.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

I. Understanding of Literature: Your understanding and appreciation of literature. Your liking for reading and reading for enjoyment.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very Much progress

J. Understanding of the Behavioral Sciences: Your understanding of the basic concepts and generalizations of psychology, sociology, or anthropology. Your awareness of yourself as a member of groups and of your relationships with others; and your awareness of different cultures, values, beliefs, and ways of life.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

K. Reasoning and Critical Thinking: Your ability to recognize assumptions, make logical inferences, and reach correct conclusions. Your ability to withhold judgment, raise questions, and examine contrary views.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

L. Familiarity with Major Approaches to Human Knowledge: Your familiarity with the basic characteristics of and the differences between the scientific, social scientific, and humanistic approaches to human knowledge.

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

M. Background for Further Study: Your preparation for furtner education or study through your specialization or major field (regardless of whether or not you actually have or plan to continue with further study).

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

N. Background for Work: Your preparation for a desired job or career through your specialization or major field (regardless of whether or not you actually have or plan to get a job or enter a career).

1. ☐ No progress
2. ☐ Little progress
3. ☐ Moderate progress
4. ☐ Much progress
5. ☐ Very much progress

NOW THAT YOU HAVE ESTIMATED HOW MUCH PROGRESS YOU HAVE MADE, PLEASE INDICATE HOW IMPORTANT YOU THINK IT IS FOR A PERSON WITH YOUR CAREER OR EDUCATIONAL PLANS TO MAKE PROGRESS IN THESE SAME AREAS.

13. How important do you think it is for a person with your career or educational plans to make progress in these same areas? (check the appropriate box for each area)

A. Writing Ability: Your ability to write clearly, correctly, and effectively.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

B. Reading Ability: Your ability to clearly understand and comprehend what you read.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

C. Speaking Ability: Your ability to speak clearly, correctly and effectively.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

D. Mathematical Ability: Your ability to make everyday calculations; to understand and use basic statistical data, probabilities, graphs and charts, etc.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

E. Understanding of Democracy and Citizenship: Your knowledge of government and awareness of your rights and responsibilities as a citizen.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

F. Understanding of History and Geography: Your understanding of past and present social and physical conditions of mankind and the natural world. Your awareness of self in time and place.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

G. Understanding of Science and Technology: Your understanding of scientific facts, principles and procedures and their technological applications.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

CONTINUED ▸

OFFICE Use Only

TTU ALUMNI QUESTIONNAIRE

ANSWERS TO ALL QUESTIONS ASKED IN THIS SURVEY WILL BE TREATED STRICTLY CONFIDENTIALLY

RESULTS WILL BE REPORTED ONLY IN A STATISTICAL MANNER. YOUR NAME WILL NEVER BE IDENTIFIED WITH ANY ANSWERS GIVEN.

1. **NAME: (Please Print)**

Last First Middle I.

2. **Permanent Mailing Address:**

Street and Number

City State Zip Code

3. **Student Identification Number:** (Social Security Number)

4. **Sex: (check one)**

1. ☐ Male 2. ☐ Female

5. **Marital Status: (check one)**

1. ☐ Single 3. ☐ Widowed
2. ☐ Married 4. ☐ Divorced

6. **Age: (check one)**

1. ☐ Under 18 5. ☐ 35-44
2. ☐ 18-20 6. ☐ 45-54
3. ☐ 21-24 7. ☐ 55 years & over
4. ☐ 25-34

7. **Undergraduate College Affiliation at Tech: (check one)**

1. ☐ College of Agriculture and Home Econ.
2. ☐ College of Arts and Sciences
3. ☐ College of Business Administration
4. ☐ College of Education
5. ☐ College of Engineering

8. **Department Affiliation: (write-in; please print)**

9. **Major: (write-in; please print)**

10. **Did you transfer credits from another college or university toward your degree from TTU? (check one)**

1. ☐ Yes 2. ☐ No

11. **Were you primarily a full-time (12 hours or more) or part-time student while you attended TTU? (check one)**

1. ☐ Primarily full-time
2. ☐ Primarily part-time

12. **In thinking over your entire undergraduate educational experience at TTU (both in and out of the classroom), how much do you think attending the University contributed to your progress in each of the following areas? (check the appropriate box for each area)**

A. Writing Ability: Your ability to write clearly, correctly, and effectively.

1. ☐ No progress 4. ☐ Much progress
2. ☐ Little progress 5. ☐ Very much
3. ☐ Moderate progress progress

B. Reading Ability: Your ability to clearly understand and comprehend what you read.

1. ☐ No progress 4. ☐ Much progress
2. ☐ Little progress 5. ☐ Very much
3. ☐ Moderate progress progress

C. Speaking Ability: Your ability to speak clearly, correctly and effectively.

1. ☐ No progress 4. ☐ Much progress
2. ☐ Little progress 5. ☐ Very much
3. ☐ Moderate progress progress

D. Mathematical Ability: Your ability to make everyday calculations; to understand and use basic statistical data, probabilities, graphs and charts, etc.

1. ☐ No progress 4. ☐ Much progress
2. ☐ Little progress 5. ☐ Very much
3. ☐ Moderate progress progress

E. Understanding of Democracy and Citizenship: Your knowledge of government and awareness of your rights and responsibilities as a citizen.

1. ☐ No progress 4. ☐ Much progress
2. ☐ Little progress 5. ☐ Very much
3. ☐ Moderate progress progress

F. Understanding of History and Geography: Your understanding of past and present social and physical conditions of mankind and the natural world. Your awareness of self in time and place.

1. ☐ No progress 4. ☐ Much progress
2. ☐ Little progress 5. ☐ Very much
3. ☐ Moderate progress progress

CONTINUED •

QUESTION 13 – Continued

H. **Understanding of Economics:** Your knowledge of basic facts and principles of economics; which allow you to understand matters affecting costs, supply and demand, economic growth, inflation, unemployment, etc.; and which allow you to make intelligent choices and decisions as a consumer and citizen.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

I. **Understanding of Literature:** Your understanding and appreciation of literature. Your liking for reading and reading for enjoyment.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very Much import.

J. **Understanding of the Behavioral Sciences:** Your understanding of the basic concepts and generalizations of psychology, sociology, or anthropology. Your awareness of yourself as a member of groups and of your relationships with others; and your awareness of different cultures, values, beliefs, and ways of life.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

K. **Reasoning and Critical Thinking:** Your ability to recognize assumptions, make logical inferences, and reach correct conclusions. Your ability to withhold judgment, raise questions, and examine contrary views.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

L. **Familiarity with Major Approaches to Human Knowledge:** Your familiarity with the basic characteristics of and the differences between the scientific, social scientific, and humanistic approaches to human knowledge.

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

M. **Background for Further Study:** Your preparation for further education or study through your specialization or major field (regardless of whether or not you actually have or plan to continue with further study).

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

N. **Background for Work:** Your preparation for a desired job or career through your specialization or major field (regardless of whether or not you actually have or plan to get a job or enter a career).

1. ☐ No importance
2. ☐ Little import.
3. ☐ Moderate import.
4. ☐ Much import.
5. ☐ Very much import.

14. What month and year did you complete your requirements for the bachelor's degree from Tennessee Tech?

1. ☐ December 1976
2. ☐ March 1977
3. ☐ June 1977
4. ☐ August 1977

15. Have you enrolled in another degree program since receiving your bachelor's degree from TTU? (check one)

1. ☐ Yes
2. ☐ No

If you have answered YES, please complete questions 16–21 about the first college you attended since graduating from TTU. If you answered NO, skip to question 22.

16. What was the name and location of the first college you attended since receiving your bachelor's degree from TTU?

_____
Name

_____
City State

17. Please write in your major/program while attending the above school. (please print)

_____

18. Was this school your: (check one)

1. ☐ First choice
2. ☐ Second choice
3. ☐ Other

19. What degree were you seeking: (check one)

1. ☐ Another Bachelor's degree
2. ☐ Master's degree
3. ☐ Professional degree (includes ONLY dentistry, medicine, optometry, osteopathy, podiatry, veterinary medicine, law and theology)
4. ☐ Doctor's degree (e.g., Ph.D., Ed. D., D.B.A.)

20. How well did TTU prepare you for your new degree program? (check one)

1. ☐ Excellent preparation
2. ☐ Good preparation
3. ☐ Fair preparation
4. ☐ Inadequate preparation

21. What was your first term grade point average (on a four-point scale) in your new degree program? (check one)

1. ☐ 2.0 or less
2. ☐ 2.1 to 2.5
3. ☐ 2.6 to 3.0
4. ☐ 3.1 to 3.5
5. ☐ 3.6 to 4.0

22. Regardless of whether you are going on to another educational program at this time, what is the HIGHEST degree you eventually intend to complete? (check one)

1. ☐ Bachelor's degree
2. ☐ Master's degree
3. ☐ Professional degree (includes ONLY dentistry, medicine, optometry, osteopathy, podiatry, veterinary medicine, law and theology)
4. ☐ Doctor's degree (e.g., Ph.D., Ed. D., D.B.A.)

CONTINUED

23. **Have you held a full-time job (35 hours a week or more) since receiving your bachelor's degree from TTU? (check one)**

1. ☐ Yes 2. ☐ No

If you answered YES, please complete questions 24–33 about your first full-time job since graduating from TTU. If you answered NO, you are now finished with the questionnaire.

••••••••••••••••••••••••••••••

24. **How long after receiving your bachelor's degree from TTU did it take you to find your FIRST FULL-TIME job? (check one)**

1. ☐ I had the job before graduation.
2. ☐ 2 months or less
3. ☐ 3 to 6 months
4. ☐ 7 months to 1 year
5. ☐ Over 1 year

25. **How did you learn of this job? (check primary source)**

1. ☐ Was already working in it while enrolled
2. ☐ University placement office
3. ☐ Professional organization or journal
4. ☐ Public or private employment agency
5. ☐ Newspaper advertisement
6. ☐ Direct application to employer
7. ☐ Faculty referral
8. ☐ Referral through friend or relative
9. ☐ Other (please specify)

_____

26. **What kind of work did this job involve? For example: accounting, teaching, electrical engineering, welding, etc. (please print)**

_____

27. **In which of the following employment sectors was this job? (check one)**

1. ☐ Government
2. ☐ Education
3. ☐ Other nonprofit organizations
4. ☐ Business and service

28. **To what extent was this job related to the major/program in which you were enrolled at TTU? (check one)**

1. ☐ Not related 3. ☐ Directly related
2. ☐ Somewhat related

29. **If this job was NOT related to your major/program, what is the principal reason? (check one)**

1. ☐ Not applicable to me (My job was "somewhat" or "directly" related to my major/program).
2. ☐ I did not look for a job related to my major/program.
3. ☐ I looked, but could not find a job related to my major/program.

30. **How well do you feel TTU prepared you for this job? (check one)**

1. ☐ Excellent preparation
2. ☐ Good preparation
3. ☐ Fair preparation
4. ☐ Inadequate preparation

31. **Which statement BEST describes how you regarded your FIRST full-time job? (check one)**

1. ☐ Employment with DEFINITE career potential
2. ☐ Employment with POSSIBLE career potential
3. ☐ Employment to earn money while I decided what kind of work I wanted
4. ☐ Temporary employment to earn money to do something else (travel, school, have free time, etc.)
5. ☐ Temporary employment until something better could be found

32. **What was the starting annual salary or wage you received on your FIRST full-time job? (check one)**

1. ☐ Less than $3,000 per year ($1.44 or less per hour)
2. ☐ $3,000 to $5,999 per year ($1.45 to $2.88 per hour)
3. ☐ $6,000 to $7,499 per year ($2.89 to $3.60 per hour)
4. ☐ $7,500 to $9,999 per year ($3.61 to $4.80 per hour)
5. ☐ $10,000 to $14,999 per year ($4.81 to $7.21 per hour)
6. ☐ $15,000 to $24,999 per year ($7.22 to $12.01 per hour)
7. ☐ $25,000 and above per year ($12.02 or more per hour)

33. **Would you have qualified for this job without a bachelor's degree? (check one)**

1. ☐ Yes 3. ☐ Don't know
2. ☐ No

Thank you for taking the time to fill out this questionnaire.

—Remember that answers to all questions will be treated STRICTLY CONFIDENTIALLY and that your name will NEVER be identified with any answers given.

Please place your completed questionnaire in the enclosed pre-addressed envelope and return — *AS SOON AS POSSIBLE* — to:

Director
Performance Funding Project
Box 5166
Tennessee Technological University
Cookeville, Tennessee 38501

BUDGET ALLOTMENT SUMMARY*

THEC PERFORMANCE FUNDING PROJECT
AT TENNESSEE TECHNOLOGICAL UNIVERSITY

MARCH 15, 1977 - JUNE 30, 1978

PROJECT ALLOTMENT INFORMATION:

OBJECT DESCRIPTION	ALLOTMENTS
Instructional Salaries	$20,465
Clerical and Supporting	784
Travel	2,626
Supplies and Expense	8,125
Total Allotments	$32,000

INSTITUTIONAL CONTRIBUTIONS:**

OBJECT DESCRIPTION	ALLOTMENTS
Instructional Salaries	$5,448
Employee Benefits	1,185
Total Allotments	$6,633

---

* An official statement of Project Expenditures will be forwarded from the University's Business Office.

** Selected additional institutional contributions (not charged):

Estimated administrative overhead.....	$11,395
Estimated value of clerical support.....	7,000
Utilization of equipment, utilities, etc...	------